

FIRST AWARD.
SYDNEY, 1879.

BICKFORD'S PATENT FUSES

FIRST AWARD.
MELBOURNE, 1881.



SILVER MEDAL OF THE MINING INSTITUTE OF CORNWALL, TRURO, 1880,
for an Improved Method of Simultaneous Blasting.

FOR SIMULTANEOUS BLASTING.

BICKFORD, SMITH AND CO.,

THE INVENTORS, AND ORIGINAL PATENTEES AND MANUFACTURERS OF

SAFETY AND INSTANTANEOUS FUSES AND IGNITERS

FOR USE IN ALL BLASTING OPERATIONS AND SPECIALLY PREPARED FOR ANY CLIMATE

Note the **TRADE MARK**: Two Separate threads through centre of Fuse.

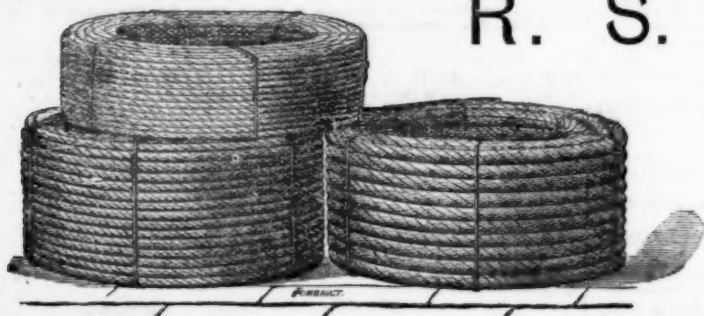
BICKFORD, SMITH AND CO.'S Patent Igniters and Instantaneous Fuses for simultaneous blasting are being extensively used at home and abroad. This improved method is the cheapest, simplest, and most dependable ever introduced for simultaneously firing any number of charges. For full particulars, see Descriptive Catalogue.

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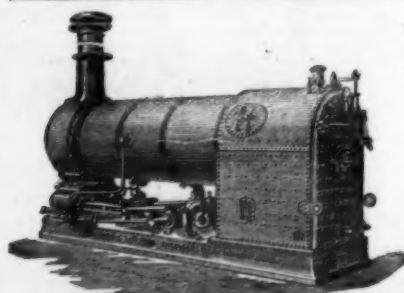
The PATENT "ROBEY" MINING ENGINE is complete
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either as a Permanent or Temporary
Winding or Pumping Engine.



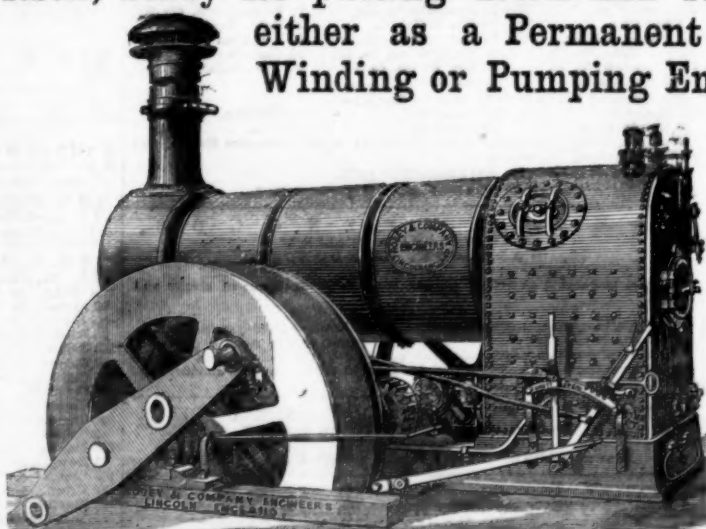
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ALL SIZES KEPT IN STOCK FROM TO 65-H.P. NOMINAL.

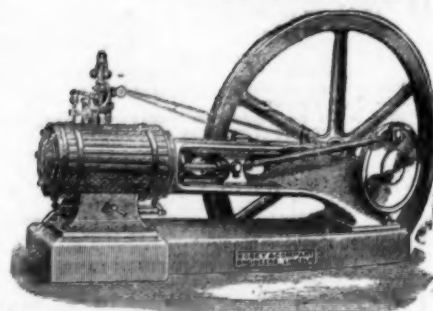
Please note this is the Original "ROBEY" Engine as designed
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Medals
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TELEPHONE No. 14, LEEDS EXCHANGE.

17.—SELF-CONTAINED TURNTABLE, Requiring no Foundation.



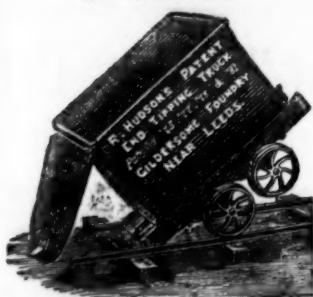
Upwards of 25,000 of these Trucks and Wagons have been supplied to the South African Diamond Mines; American, Spanish, Indian, and Welsh Gold, Silver, Copper, and Lead Mines; Indian and Brazilian Railways, and to Railway Contractors, Chemical Works, Brick Works, and Coal and Mineral Shippers, &c., &c., and can be made to lift off the underwork, to let down into the hold of a vessel, and easily replaced. They are also largely used in the Coal and other Mines in this country, and are the **LIGHTEST, STRONGEST**, and most **CAPACIOUS** made, infinitely stronger and lighter than wooden ones, and are all fitted with R. H.'s Patent "Rim" round top of wagons, requiring no rivets, and giving immense strength and rigidity. End and body plates are also joined on R. H.'s patent method, dispensing with angle-irons or corner plates.

Registered
Telegraphic Address—
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LEEDS."
A. B. C. Code used.

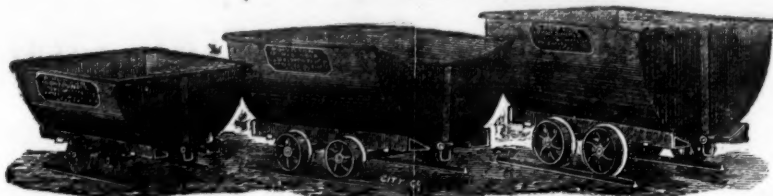
Patented in Europe, America, Australia, India, and British South Africa,
1875, 1877, 1878, 1881, and 1883. N.B.—The American, Australian, Indian, and Spanish Patents on Sale.

CAN BE MADE TO ANY SIZE, AND TO ANY GAUGE OF RAILS.

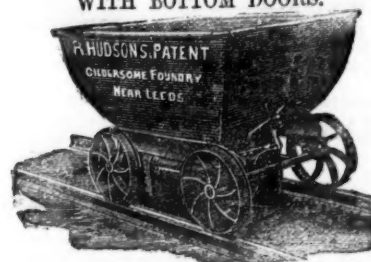
1.—PATENT STEEL END TIP WAGONS.



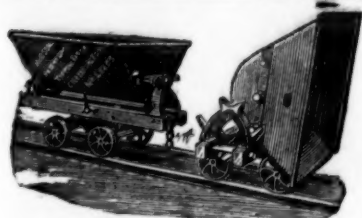
7.—PATENT STEEL MINING WAGONS.



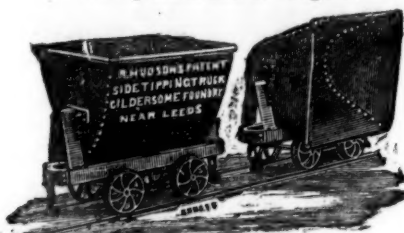
12.—PATENT STEEL HOPPER WAGON, WITH BOTTOM DOORS.



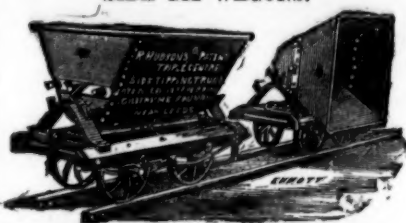
2. PATENT UNIVERSAL TRIPLE-CENTRE STEEL TIPPING TRUCK, Will tip either side or either end of rails.



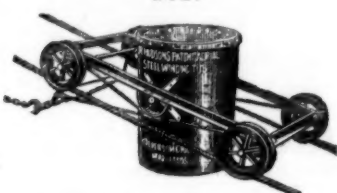
8.—PATENT DOUBLE-CENTRE STEEL SIDE TIP WAGONS, Will tip either side of Wagons.



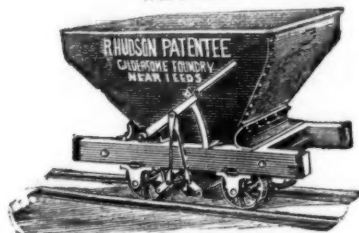
3.—PATENT TRIPLE-CENTRE STEEL SIDE TIP WAGONS.



18.—"AERIAL" STEEL WINDING TUB.



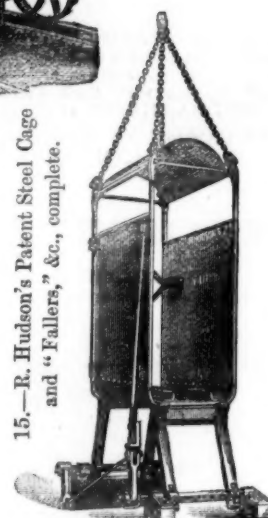
13.—PATENT STEEL HOPPER WAGON.



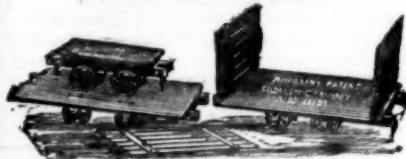
19.—PATENT STEEL CHA GING BARROW. DOUBLES the STRENGTH and much LIGHTER than ordinary Barrows.



15.—R. Hudson's Patent Steel Cage
and "Fallers," &c., complete.



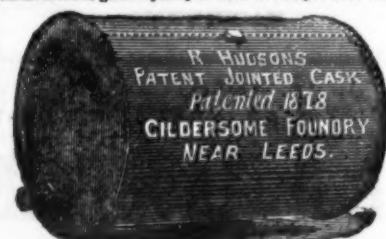
4.—PATENT STEEL PLATFORM OR SUGAR CANE WAGON.



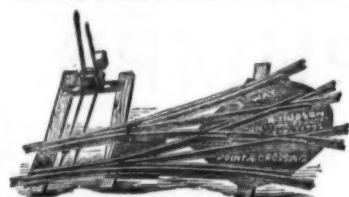
10.—LEFT-HAND STEEL POINT AND CROSSING.



5.—PATENT STEEL CASK. As supplied to H.M. War Office for the late war in Egypt. DOUBLES the STRENGTH of ordinary Casks without any INCREASE in weight. (Made from 10 gals. capacity UPWARDS to any desired size.)

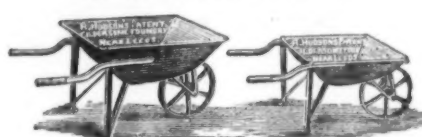


11.—RIGHT AND LEFT-HAND STEEL POINT AND CROSSING.



16.—PATENT STEEL WHEELBARROWS.

Made to any Size.
Lightest and Strongest in the Market.



14.—SELF-RIGHTING STEEL TIP BUCKET. (The "CATCH" can also be made SELF- ACTING if desired.)



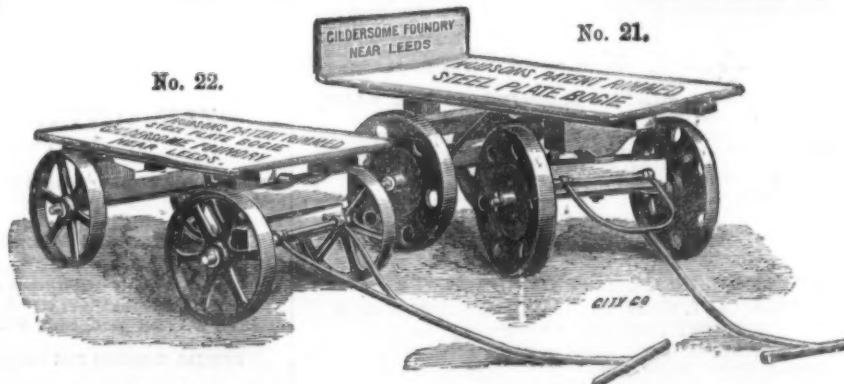
6.—ROBERT HUDSON'S PATENT IMPROVED IRON SMITH'S HEARTH, NO BRICKWORK REQUIRED.

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in STEEL, effecting a GREAT SAVING
IN WEIGHT.



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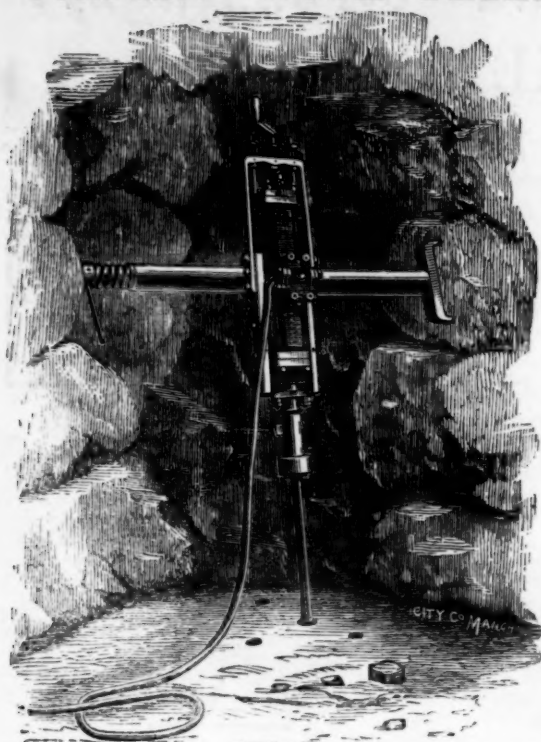
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JUBILEE EXHIBITION, 1882.
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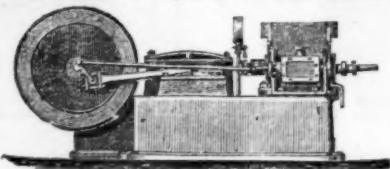
THE PATENT

"ECLIPSE" ROCK-DRILL

"RELIAANCE AIR-COMPRESSOR."

First Silver Medal awarded at Boring Competition, East Pool Mine, Sept. 1883.

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HIGHEST AWARD.



PARIS EXHIBITION,
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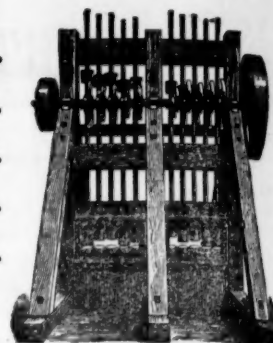
MINING MACHINERY

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Rock Drills and Air Compressors.
Pulverisers (JORDAN'S PATENT) & Disintegrators.
Wire Rope and Portable Tramways.
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IMPROVED PATENT

JORDAN'S PATENT ROCK DRILL

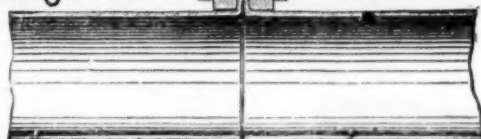
MEDALS
AND

HIGHEST
AWARDS.

American Institute, 1872.
American Institute, 1873.
London International Exhibition, 1874.
Manchester Scientific Society, 1875.
Leeds Exhibition, 1875.
Royal Cornwall Polytechnic, 1875.

Rio de Janeiro Exhibition, 1875.
Australia Brisbane Exhibition, 1876.
Philadelphia Exhibition, 1876.
Royal Cornwall Polytechnic, 1877.
Mining Institute of Cornwall, 1877.
Paris Exhibition, 1878.

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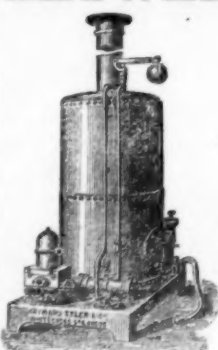
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Their DRILLS have most satisfactorily stood the TEST OF LONG
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numerous mines in Great Britain and other countries clearly proving
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THE PATENT

"Cranston" Rock Drill, AIR COMPRESSOR, AND DEEP BORING MACHINERY.

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Time Bill, with Map and Fares, free from the Owner, DAVID MACBRATYR,
115, Hope-street, Glasgow.

Original Correspondence.

GOLD COAST MINING—A SUGGESTION.

SIR,—A good deal of information respecting mining on the above coast has appeared in the last few numbers of your Journal; will you allow me space to make one suggestion drawn from such information.

Mr. Lowman tells us, and others who know the coast well say the same, that the river beds and valleys contain a large amount of gold, and they suggest the use of dredging machines. Mr. Haughton, who inspected and reported on a concession belonging to the Gold Coast Company, and Mr. Gowans, says that, having thoroughly inspected the wash dirt of Inframangi, he can speak positively with regard to the quantity of gold it contains, and mentions that Australian diggers would earn there from 6l. to 8l. per day.

In your Journal of January 19, 1884, you make some remarks on the adaptability of the Ball dredging apparatus for the treatment of such deposits, and a correspondent shortly afterwards remarks that with the Ball dredger it appears to him that mining, from being the most expensive heretofore, will become the cheapest form of mining in the future, and that the cost of dredging coarse gravel with this apparatus at Lowestoft and disposing of the soil was under 3d. a ton, and adds that there are few auriferous river bed deposits that would not pay for extraction at double the above rate.

On good authority then we learn this—that on the Gold Coast there are large auriferous alluvial deposits, and also that there are dredging machines, and Electro Quicksilver-Wave Amalgamators, which can cheaply and quickly extract the gold. Now, I would suggest not merely that a company should be formed to work one or more of such deposits, but that it should be worked on the co-operative, or paying by result system. For instance, supposing Mr. Gowans and the Gold Coast Company's concession at Inframangi were taken up to be so worked, I would contract that 50 per cent. of the profits should be given, in certain proportions, to the owners, directors, secretary, mine manager, and one or two Englishmen, if they should be required (at first, perhaps, these working officials at the mine might require a small salary), and give the other 50 per cent. to those who subscribe the capital, and the capital need not be large, as probably some arrangement could be made for the hire of the necessary machines for a certain time, long enough to give them and the deposits a fair trial. Mr. Gowans, who knows the property well, could at once say where such machinery should be placed, so that it would not have to share the fate of so much expensive machinery already on the Coast, and if he became manager could engage the few natives that would be required, and might also induce, as Capt. Burton some time ago suggested, some three or four active and intelligent young Englishmen who find no work at home to work with him there.

On this co-operative system then you would create, as one of your correspondents says—"A body of men all anxiously wishing and working for the success of the undertaking, and if the machinery could be hired, and no payments made to vendors and others, except as before-mentioned, and as, at the outside, a few months after the starting of the machinery would decide the success or non-success of the undertaking, seeing a company formed with a capital of 5000l. in 10,000 shares of 10s. each, to be called up as required, would be amply sufficient, and would be quickly subscribed." J. BUDD.

Remerton, Norfolk.

GUINEA COAST GOLD MINING COMPANY.

SIR,—I enclose a newspaper cutting and also a circular, both having reference to the extremely painful and distressing circumstances under which the late secretary, Mr. Dakin, who seems to have commanded the respect and esteem of all who knew him, met his death. (Mr. Dakin committed suicide whilst temporarily deranged.) Judging from the report just issued by the board the winding-up of the company appears inevitable. May I, through your valuable columns, suggest that in the shadow of the awful calamity which has befallen the family of the late Mr. Dakin a substantial grant of money in aid of the widow and numerous children of the unhappily deceased gentleman be unanimously voted out of the remaining funds of the company? To this my proposition I feel persuaded a shareholder will be found so flinty-hearted as to say—

London, May 27.

NO.

THE CANKIM BAMOO GOLD MINES, WEST AFRICA.

SIR,—Your correspondent, Mr. J. E. Storer, referring to these mines, says he is a shareholder in the company, and is, therefore, probably aware that the company had to stop operations from want of capital, which the shareholders refused to provide when the stamping was about to begin, when a first-rate mining engineer had offered to take the management, when the reefs and alluvials had been proved after a thoroughly practical and reliable examination to be very rich and valuable, and when a "little time and good management at the mine would have proved what we really had in store."

I believe I am right in saying that no cash payment was made by the company to the vendors of the mine, and that the greater part of the working capital of the company was subscribed by the directors, and, perhaps, a dozen of their friends. I, therefore, quite agree that it is a "shame for things to be at a standstill;" but the shame falls upon the large body of shareholders who would not subscribe one farthing towards placing the company in a position to complete the work that was almost finished. Had they done so, by this time the mine would have been sending, probably, regular remittances home, and thus would "certainly restore more confidence in West African gold mines, which has a future in them."

London, May 26.

A LARGE SHAREHOLDER.

CANKIM BAMOO GOLD MINE, WEST AFRICA.

SIR,—The secretary for this company sometime ago intimated through your Journal that the board had under consideration measures with the object of raising money to carry on the mine. As I have heard nothing further in the matter I think it is high time the promised meeting was called. I understand considerable hardship has been inflicted on some of the employees by the apparently, to me, uncalled for, and under the circumstances, inexcusable delay in doing so. Certainly silence appears no longer dignified, from which I conclude there is nothing for them to get, and the company is limited as regards their claims. I am glad to see Mr. J. E. Storer interesting himself in the affairs of the company. I trust he will also insist on the board requesting the manager and other employees to attend the meeting when called to give information. If otherwise I am afraid little will be forthcoming.

London, May 26.

A SHAREHOLDER.

AFRICAN GOLD MINES.

SIR,—I am glad to observe that attention is being once more drawn to the African gold mines, as there is not the shadow of doubt about the immense richness of that locality. I have seen a letter just received from Axim, in which the statement is made that Faral, who was left behind by Mr. Gowans when he came away a few months ago from the Gold Coast Mine, is not only paying all the expenses of the mine for wages and for developments, but is making about 30l. or 40l. per week to the good, and if this is confirmed by later dispatches, I have no doubt that Mr. Casinick, who went out recently, will find that all his hopeful anticipations are likely to be realised, and that, after all, this property will not be long in coming to the front, and thus, even at the last, bring credit to Mr. Gowans, whose energy and honesty have not of late received the acknowledgment they deserve.

In respect of the delay which has arisen in making any of these properties remunerative, it is well to bear in mind that this district is only following the lines of both Australia and California, in both of which places it took quite seven years before their value was ascertained. The great desideratum appears to me to be in the amalgamation and proper treatment of the quartz, and it is impossible to conceive that the science of the present day will not, and that shortly, overcome all difficulties in this direction. PSEUDONYM.

Liverpool, May 28.

RIVER CONCESSIONS ON THE GOLD COAST.

SIR,—Mr. Lowman in answer to my letter in your columns, asking the reason why hydraulic was a failure on Apatim concession, in last week's Journal, gives two conclusive reasons, the third quite upsets me, because I was informed by the secretary the company had sent out a new engine for the express purpose, and that it was landed in Axim without a scratch. Am I to understand the climate is so deadly that engine iron will break down and rot in 12 months' time, if so there is no wonder men sicken and die in less than no time, and Europeans demand good pay. In my opinion aspirants for such situations should be sent before a magistrate for attempting to commit suicide. The sweeping assertions Mr. Lowman makes as to placers and sluicing finds I am forced to remind him they prove nothing, and men of great experience in these operations, both in California and New Zealand, will on no account recommend. However, Mr. Lowman's opinion is certainly supported by Messrs. Burton and Cameron, who introduced that bane into London, which has nearly defied Mr. Lane's powerful and expensive antidote to allay. Withal I am still sceptic on the matter; but if Mr. Lowman, who is apparently conversant with hydraulicing and sluicing, will take the trouble to furnish me with the data required before he or any other person can form an opinion before undertaking such huge operations, then I shall be able to answer yes or no, and the reason why. The mere fact of some hill in the locality, and at least one creek 5 miles long without data will not convince me, and far less will it induce the investing public to speculate in the Gold Coast, Africa. Strong reasons and something substantial must now be shown before any company can be floated there. Even the little money in several cases required to finish works there which would be a success cannot be obtained on high interest.

London, May 27.

A SHAREHOLDER.

TIN DRESSING.

SIR,—As you so kindly inserted in the Journal of May 16 a letter on the subject of Tin Dressing, I beg to forward a few supplementary remarks. It will, no doubt, appear to all who thoughtfully look into the subject that classification, to which I then merely hinted, is an important feature in this system. Very much depends on the separation of sizes. We should be careful to have as perfect separation as can possibly be effected. The more perfect the separation the more satisfactory the results, and the more direct and easy become the cleaning of the ore. In certain instances this separation can be effected much easier than in others because of the amount of dip in ground where fixings are arranged. The double water pressure separator gives the best possible results of any yet invented and applied. The principle on which it acts may be seen in full at Wheal Grenville, and Capt. Hodge, the manager, is always pleased to give information as to its results. Some positions, however, are very flat; then it is necessary to have a scoop wheel of such diameter as is required to lift the stuff to a proper height for easy cleansing. It is admitted throughout that a complete separation of the several sizes of ore is the base of all good dressing. One question which has received an amount of consideration is whether this separation must be effected by one operation at once the tin-stuff is discharged from stamps, and the sizes be each directed into their proper course for treatment, for whether the stuff without separation must flow into one operation after another until the several sizes are gradually separated, and the ore cleansed. From the fact that a separation of the several sizes of ore is essential to a proper saving of that ore we argue that as complete separation as can possibly be made should be effected before any other operation in dressing be entered upon. Perhaps the whole bulk of stuff stamped might be separated into three distinct classes—No. 1, rough; No. 2, small; No. 3, fine. With respect to the treatment of No. 1 (rough) calculations given in the Journal of May 16 as based on actual results prove the double sieve jig to be far superior to any machine for dressing as yet applied. Class 2 (small) is treated on the same principle, and with equally satisfying results. In class 3 (slimes) the frame, especially where clear water is available for cleansing purposes, has by actual results long ere this proved itself far superior to any other machine for the delicate treatment of slimes.

One feature in this system of dressing is—it is continuous. That is, the ore as it is stamped is mechanically separated from its waste, and in one unbroken stream deposited in some receptacle prepared to receive it, an advantage this which cannot be too highly prized. Instead of waiting until the stuff is lifted, buddled, re-buddled, tossed, &c., the ore can be taken at once it is stamped. The slimes also are treated from separator direct, instead of being allowed to accumulate in large catch-pits, which can possibly be of no advantage, inasmuch as the accumulated quantities must again be made very fluid preparatory to treatment, and never can the slimes be more regular with respect to quantity of stuff in water than when discharged from the stamps into separator, and from separator served on frames and continuously treated. It will also appear that the amount of machinery and space required for this system is considerably less than that required for periodical or daily treatment. One week (say 156 hours) stamping has to be thoroughly dressed in 50 hours, or about one-third the time, which leaves the tin floors and dressing machinery idle equal to two-thirds, forcibly teaching that one-third of the machinery we now have for dredging, were it constantly going, would be equal to the whole amount at work only one-third of the time. In the continuous system, the complete dressing is conducted on principles which immediately concentrate the ore into the smallest possible compass, dispensing with its waste, which requires no machinery for further treatment. And no reason can possibly be assigned why this dredging should not be more satisfactorily accomplished. The machinery once set in working order immediately proves its efficiency. Completeness is another feature, unlike the old dressing-floors, where all characters and qualities of stuff eventually mix. Each axle of 16 heads has its dressing machinery complete; one double jig is ample to cleanse all the rough, and one double frame for each head of stamp with its necessary depositing and cleansing buddle is ample for all the other portions.

Inexpensiveness in dressing is also seen in the fact that quite 75 per cent. of its rough waste is without the least trouble dispensed with, and that only 25 per cent., or in certain instances considerably less, remains to be handled.

The superiority of this system of dressing has long ere this been accepted, and even acknowledged. No doubt as its influence gains ground the principle will be more fully tested, when eventually, becoming thoroughly satisfied with its results, it will be generally adopted, and more highly appreciated and valued.

J. HALL.

Twelveheads, Decoran, May 26.

THE INDUSTRIES OF IRELAND.

SIR,—Professor Edward Hall, Director of the Geological Survey of Ireland, &c., in reply to questions by the Select Committee of Irish Industries, stated that he did not agree with Dr. Sullivan, of Cork, who, in his examination by the committee, said—"The minerals of Ireland are not worthy of much consideration." He (Professor Hall) thought they were of some importance intrinsically, but he placed iron before coal. The above extract is from the *Cork Herald*, and I will thank you for space in the Journal for a few remarks thereon. When learned professors and presidents of colleges ignore the existence of copper, lead, blende, manganese, barytes, gypsum, &c., and the first directors of the Geological Survey described West Cork as red sandstone, is it to be wondered at that capitalists from England or elsewhere do not invest money in their development. In West Cork the Berehaven Mines during the last 50 years produced millions' worth of copper ore. The mountains to the east of these mines, containing numerous great lodes, have never been explored, while the remotest corners of the earth have been searched for minerals. South Berehaven, as the name implies, to the south of the "grand old copper mine," is being opened with a prospect of rivaling its namesake. Unexplored minerals abound in this district: the south zone of copper lodes, extending from Brow Head to Running Water, a distance of 20 miles, have produced tens of thousands of pounds worth of rich copper ore, equal in quality to the produce of foreign mines, whilst the malachite from Coosheen Mine was equal

in quality to Russian or Australian. I have not time at present to refer to other mining districts; but West Cork alone, if its mines were thoroughly and practically developed, would, with the exception of tin, be equal to the mines of Cornwall. I consider that I am as well acquainted with the character and value of the mines and minerals of West Cork as any man living, and I ask Dr. Sullivan to disprove my statements, if he can. I would also remark, Dr. Sullivan's opinion to the contrary notwithstanding, that until the agriculture of Ireland is supplemented by its mines, quarries, and fisheries, it will not be a prosperous country. Let its mines be worked, and manufactures will follow.

W. THOMAS.

Coosheen Cottage, Schull, Co. Cork, May 23.

HONEST MANAGERS.

SIR,—Extraordinary utterances, wise and otherwise, drop at times from the mouths of Chairmen at public companies meetings, and in your last issue one of these is reported to have said, speaking of the company's mining manager—"He has exhibited that honesty which is a necessity for the management of the affairs of this company. (Cheers.) I say with all due deference that honesty in the management of a mining property of such great value as this is more even than ability. (Hear, hear.) It does not require great ability to carry on a mine; it requires some technical knowledge." If these are the views of those who have the control of mining properties, and the applause would seem to indicate they are not quite confined to the Chairman, surely the great exertions now making to increase the abilities of mine managers are labour in vain. Or are we to infer that honesty is so rare a quality in managers of mines that it is, when found, to be made a special note of? When one remembers that more than half a million of good English gold has already disappeared for ever in the mine over whose destinies the said Chairman now rules, one is inclined to wonder where the further funds he is now asking for will go to them if "them's his sentiments." CHILLY.

THE COLLIERS' STRIKE IN SOUTH YORKSHIRE.

A settlement and a general return to work on the masters' terms seem to be nearer at hand now than when our last report appeared. One by one the collieries are resuming work, the men finding that the masters did not intend to deviate from their resolution to deduct the 10 per cent. conceded the miners in 1882, and seeing quite clearly that the funds which have supported them during the past eight weeks are becoming very scanty, and that unless they went in and resumed work men would be got from other parts of the country to take their places. In one instance—that of the Denaby Main Colliery—where 150 families were evicted from the company's houses, and concerning which Mr. Burt last week asked a question in the House of Commons, the men have been on strike from the commencement of the dispute, and they appear to be quite determined not to give in. The company obtained men from Cornwall, but these were frightened by the men, who paid their fares and packed them off again to their own county. The company, being unable to get men, have decided that, if within a few days sufficient men to work the colliery do not volunteer, they will wind up their affairs and close the pit for good. At the Manvers Main Colliery, where 750 non-Unionists and 450 Unionists are affected by the decision, it has been decided by a large majority to return to work, the men appearing to be strongly of opinion that if the compromise offered at the commencement of the struggle by them had been proffered by the remainder of the district there would have been no strike, and the pits would have been working at a reduction of 5 per cent. only, instead of having eventually to submit to the full reduction of 10 per cent.

At an adjourned conference of the delegates from the various lodges of the South Yorkshire Miners' Association, it was resolved to continue to resist the reduction by all legal means, but notwithstanding this fact it is pretty clear that the strike is nearing its end, for there are now no less than 10,000 men in South and West Yorkshire who have resumed work at the reduction. Men who dare not work—although they were willing—in their own places, are simply moving to other districts so that any delay in coming to terms will simply deepen the distress of their wives and families, as well as adding to the difficulty which their employers will have in securing them work during the summer months.

As regards the condition of the coal trade it can only be said that it has continued to get worse, more especially the house coal trade, very few of the steam coal pits being at work. The tonnage sent to the London market has been lately unusually light, merchants being unable to see their way clear to add to their already heavy stocks, especially in the face of a possible further declension in the pit prices. The lowest price last year for best Silkstone was 21s., delivered into customers' cellars, being the same price at which Silkstone is offered to-day. Concerning the trade doing with other districts there appears to be no change to notice in the demand, which, under the circumstances, is most unsatisfactory; and, as for prices, any quantity of house coal can be purchased at the pits at 8s. to 9s. per ton. Under ordinary circumstances the house coal pits are only working four days a week. At the few steam coal pits which are working a steady trade is being done largely in coal for locomotive use on the railways, although at many of the ironworks large numbers of engines have been thrown idle by the strike. With the Humber ports, too, the pits that are working are doing much heavier business than usual, though, strange to say, the prices obtained for the bulk of the trade are very little above, and in some cases lower, than what prevailed before the strike.

The miners appear to be beginning to see the harm that is being done by their persistency in resisting the return of the 10 per cent. conceded them by the masters as an experiment, now that the experiment has proved a failure.

COMMERCIAL FAILURES.

The number of failures in England and Wales gazetted during the week ending Saturday, May 23, was 94. The number in the corresponding week of last year was 53, showing an increase of 41, being a net increase in 1885, to date, of 131.

The failures were distributed amongst the following trades, and, for comparison, we give the number in each in the corresponding weeks in 1883 and 1884:—

	1885.	1884.	1883.
Building trades.....	4	6	22
Chemists and druggists	—	2	1
Coal and mining trades	2	1	5
Corn, cattle, and seed trades	4	—	1
Drapery, silk, and woollen trades	9	5	19
Earthenware trades	—	—	1
Farmers	6	2	10
Furniture and upholstery trades ..	3	2	7
Grocery and provision trades	18	9	34
Hardware and metal trades	2	2	5
Iron and steel trades.....	8	3	8
Jewellery and fancy trades.....	6	3	8
Leather and coach trades	8	3	10
Merchants, brokers, and agents ..	4	3	16
Printing and stationery trades ..	—	—	5
Wine, spirit, and beer trades	10	5	19
Miscellaneous.....	10	7	23

Totals for England and Wales. 94 53 191
Scotland 15 18 19
Ireland 1 — 4

Totals for United Kingdom ... 110 71 214

The number of Bills of Sale published in England and Wales for the week ending May 23, was 290. The number in the corresponding week of last year was 230, showing an increase of 60, being a net increase in 1885, to date, of 135. The number published in Ireland for the same week was 18. The number in the corresponding week of last year was 9, showing an increase of 9, being a net increase in 1885, to date, of 5.—*Kemp's Mercantile Gazette.*

THE GOLD AND DIAMOND FIELDS OF SOUTH AFRICA—No. IV.

BY THOMAS COLLINGWOOD KITTO, M.E.

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After securing all our cattle I moved on towards the Karatara river, keeping very close to the foot of the Black Mountains. The south side of those mountains are beautifully grand everywhere. High up, the mountains, which are composed principally of a coarse sandstone, are comparatively bare, but the base of the mountains are heavily wooded, and the deep dark ravines through which the mountain torrents rush on to the river, sometimes through narrow gorges, and sometimes falling over precipices hundreds of feet, makes it a very difficult district to explore, and gives it the most weird appearance of any place I have ever seen. It is often thought a very rosy billet to go exploring for the Government with a well-equipped expedition, and it is quite within the power of the explorer to make it so; but if a person does his duty and carries out his explorations systematically, regardless of obstacles, it is by no means an easy task, and is often attended with considerable danger. The upper portion of the Karatara river and its tributaries are the haunts of the bush buck, the elephant, the leopard, and genet. The undergrowth in the forests is so dense that a person can seldom see many yards in advance, so that one never knows when he may drop across some of those interesting animals, which, however welcome they may be to the properly-armed hunter, are decidedly unwelcome to a person geologising, whose only weapon was a small steel pick. It was impossible to take my wagon into the forests, so that this portion of my explorations had to be conducted entirely on foot, often necessitating my sleeping in the open air on the ground many miles away from my camp. On these occasions I was generally accompanied by two Kaffirs, who carried my rug and provisions, and kept watch alternately by night, while I took all the sleep that was possible under the circumstances, always with one eye open. After leaving Diep river I found nothing worthy of note until I reached to within about half a mile of the Karatara, where the geological formation is composed of gneiss, schist, and a semi-decomposed clay-slate. I noticed that wherever the clay-slate occurs it is invariably crossed by quartz veins, which vary in thickness from 1 in. to several feet, and some of them I found to be slightly auriferous. The descent of this river is everywhere very rapid, and consequently there are places for miles in length where there is no alluvial deposit. But there are one or two places where the gravel has accumulated on the bank, and in such places I invariably got a trace of gold. In one of the most likely places not far from Hollywood Park I pitched my camp with a view of making a practical test, and for this purpose I purchased some planks from Mr. Atkinson, and constructed a run of roughly made sluices; they were not very ornamental, but served my purpose, and caught fully 80 per cent. of all the gold in the stuff. I tended the sluice myself, and had five men supplying it with gravel for three days. The gold was beautiful and of high quality, but this bank of gravel could not be made to pay. In fact, I arrived at the conclusion that under the most favourable circumstances it would cost fully 40*l.* sterling per ounce. Having found indications of gold at this place there was some encouragement for me to explore the upper portion of the river, and I did so. I found a mere trace of gold in many of the rivulets which were running down the side of the mountain. I tested the deposit which had gathered on every shelving piece of rock, every gulch or gully which led up to the summit of the mountain, and I tested scores of samples from the very summit. I frequently found a trace of gold—in fact, in one or two places the samples were equal in their yield per ton to some payable placers which I have seen in other countries. But the payable placers consisted of beds of gravel from 60 ft. to 160 ft. thick, covering an area of many square miles, while the deposits on the Karatara, from which I got my samples, consisted merely of a few tons, which could be worked out by an old digger in a day or two.

On the summit of the mountain there are scores of quartz reefs measuring in the aggregate many miles in length. I tested numerous samples from them, but could find no gold in the quartz. In one instance only I got a faint trace of gold from the casing of one of the reefs towards the hanging (head) wall. I think it highly probable that the degradation of those mountains has produced the particles of gold which I found on the banks of the Karatara and in the rivulets. Nothing that I saw could possibly pay to work, although I am sorry to say I have more than once seen companies floated with no better prospects. A gentleman in the neighbourhood offered to show me a place a little way up the side of the mountain where gold had been found. We left about three in the morning, and arrived at the place about nine. We had a small dog with us, and fortunately a gun. The dog took up the scent of something, and led us in a great state of excitement to the foot of a large tree, where, looking up, we saw a beautiful leopard. My companion fired, and it fell to the ground with a thud, when a second shot killed it. By the time I had examined the place supposed to be auriferous, one of my Kaffirs had unskinned the animal, and I have always set great value on the skin as a souvenir of the Karatara. Several small pits had been sunk in the place pointed out to me in which there was some big lumps of indifferent looking quartz, but I could find no gold. It appears to be a prevalent opinion, not only in South Africa, but in many other places, that wherever there are extensive quartz reefs there must of a certainty be gold. This, however, is a delusion and a snare.

Before removing my camp from Hollywood Park I examined the neighbourhood of Yellow Wood river. I found a faint trace of gold in several places, but nothing of any value. A gentleman pointed out to me a pit that had been sunk many years before in search of coal. He informed me that in sinking they came upon a bed of something very black, and that the workmen, taking undue advantage of the discovery, struck for higher wages, which the proprietors refused to give. The pit then became filled with water, and the concern abandoned. However sceptical I might be, I felt determined not to overlook a single point which might benefit the Government. I, therefore, constructed a rude windlass, bought a dried ox skin, and made a rope, and with our own water buckets we cleaned out the pit in a couple of days. The pit was about 26 ft. deep, and the geological formation gneiss. In the bottom of the pit there was a layer of clay in which there were some very thin scales of graphite. The shaft or pit was very wet, so that when the stuff was broken the graphite gave the whole a very black appearance, but where I saw it is of no value. The Karatara is certainly no good as a poor man's diggings, but I found traces of gold in so many places so wide apart from one another that persons living in the immediate neighbourhood who has a little spare cash might reasonably do a little prospecting, although I could not very strongly recommend it.

From the Karatara I moved on to the Great Homtini, the Little Homtini, and Wit Els rivers. These rivers are near each other, and the banks are crossed and recrossed with quartz veins, varying from 2 ft. to 10 ft. broad. Any Australian digger would expect to find gold in these reefs, and consequently in the alluvium; but they are absolutely barren, and not a trace of gold could I discover in any portion of them.

I next moved to Rugte Vley, the place where a Mr. H. found a nugget of gold some time before. I had the pleasure of meet-

ing Mr. H. on the spot. He informed me that while walking along the road which crosses a sand-hill he picked up something yellow and heavy, of which he did not know the value; but, on sending it to the Government, it was found to be a nugget of gold. I told him he had evidently been hoaxed, as it was a very unlikely place to find a nugget of gold. The reported discovery caused the Government to pay for the sinking of several shafts, one of which I found to be about 40 ft. deep. While this pit was being sunk gold was reported to be found almost daily. The Civil Commissioner informed me that he had seen the fine gold washed out, and he had watched the prospectors so carefully that it was impossible he could be deceived. I told him that no gold had ever been taken out of that pit unless it was first put there by somebody, and explained to him that the resources of old diggers for deceiving "greenhorns" (the inexperienced) were inexhaustible. I have on several occasions known diggers who wanted to sell a worthless claim mix fine gold with clay, and put it under their finger-nails. As soon as they dip their hands in the dish to mix the sample in water the gold falls out, the result being highly satisfactory to "the looker-on who don't see most of the game."

IRISH MINES.

An Irish correspondent send us the following sketch of West Cork Mines:—During a recent visit to Bantry I availed of a new line of road running west from Bantry, on the south shore of the beautiful bay, to Glan Cove, and then crossed the mountains to the village of Kilerohane and Dunmanus Bay, returning after several days' sojourn to the mountain district by an excellent road on the north shore of Dunmanus Bay, Kilerohane, to the village of Durrus. There are good roads from Durrus to Bantry, Ballydehob, and Schull, Goleen, Crookhaven, Skibbereen, &c. The new line from Bantry to Kilerohane passes through wild, grand scenery, and affords magnificent views of Bantry Bay, Castletown, Berehaven, and the Atlantic Ocean. About 2 miles west of Bantry, in making the new line of road, a large lode was discovered, containing argentiferous ore, yielding 35 per cent. of copper and 350 ozs. of silver to the ton of ore; also arsenical pyrites, gossan, &c. Superficial trials were recently made, and rich silver ore found in the hard surface rock; but until the lode is proved by sinking on its course this extraordinary outcrop cannot be expected to yield much mineral. I met a gentleman at this mine—Lissaremig—the best authority in West Cork, who informed me there was a flookan coming into the bottom of the shaft, 5 fms. deep, which will greatly facilitate the sinking, and make an important change in the character of the lode under the hard surface rock. The sinking on the flookan seems to be a practical plan of operation, and, as the carrying it out would require but a small outlay—and good results very likely to occur—it is strange so simple a trial is not made. But my friend informed me that if Irish mines did not make returns and profits almost as soon as operations commenced they were condemned.

Passing on to the west of Lissaremig we came to Roska and Keilovogue Silver-lead Mines. These mines were partially opened many years ago, and considerable quantities of ore raised. They are idle at present.

Continuing our route to the west we come to Glan Cove. This property is situated on the south shore of Bantry Bay, and copper lodes may be seen in the cliffs forming the east side of the Cove, and also in the Glen, running south-east into a mountain 1000 ft. above the sea level from the Cove. Recently a few trials were made by driving an adit level a short distance south from the Cove, and opening one of the lodes in the cliffs east side of the Cove. Some tons of rich ore were raised by this shallow trial. Four or five lodes are seen here in the cliff, and a cross-cut north from south face of cliff would intersect the whole of them, and each lode as cut could be driven on east, laying open high backs for stoping, and no cost for water charge, while the adit cross-cut south would intersect all the great east and west lodes in that direction. An eminent authority I had the pleasure of meeting at Glan Cove pointed out to me the spot where many years ago in clearing out the foundations for a house the back of a large lode was discovered, containing rich copper ore, mundie, carbonate of lime, and malleable or pure native copper. It was also pointed out to me that by driving east of cross-cut south about 15 fms. the level would come under this great lode—this inexpensive trial can hardly be considered a speculation. The sett, I am informed, contains by Ordnance Survey 1000 acres, and is held by lease for 31 years at a rent of 30*l.* per year, free of dues or royalties, and so long as the rent is paid the lease cannot be forfeited.

Immediately to the west, and adjoining Glan Cove, we came to the South Berehaven Mine, in which the bands of great east and west lodes are intersected by a great caunter lode, 30 ft. wide, running south-east into a mountain 1200 ft. above the sea level. The adit level, which is being driven on the caunter lode, is yet but 10 fathoms deep, but will attain great depth as it goes into the mountain. In driving the adit 25 fathoms and stoping the back over 100 tons of ore have been raised, giving from 9 to 15 per cent. of copper. The ore consists of green carbonates, black and red oxides, yellow ore, &c., in a fine gossan back. Going north-west, where the caunter intersects the great east and west quartz and gossan lodes, considerable quantities of mundie have been found coated with black oxide of copper, and also fine lumps of strong yellow ore. In this direction a shaft, named the Mundie Shaft, has been sunk 10 fathoms under the adit level, or 14 fms. from surface. The water is now being pumped out of this shaft by a first-class water-wheel, which is of sufficient power to pump the mine to a considerable depth, and also to work a crusher, and haul all the stuff. The 10 fm. level it seems will be pumped dry in a day or two, when it will be driven east with all speed under the rich ore and gossan back in the adit level, and also west to intersect the great east and west lodes. In about 12 months, in the opening of a new mine, 100 tons of ore have been raised, dressing-floors and appliances completed, tramways laid down, &c. Neat and substantial offices, store-houses, workshops, smithy, and assay office have been built, and slated roofs, roads, and pathways made; also reservoirs and water-courses, and moorings laid down in Bantry Bay, to facilitate the shipment of ore, which can be put on board for less than 1*s.* per ton, there being no land carriage. The sett, I am informed, contains 350 acres, and is held by lease for 31 years, at a rent of 10*l.* a year, free of royalties or dues, and no clause of forfeiture so long as the rent is paid. My friend who accompanied me remarked that in all his experience he had never seen an instance elsewhere where a new mine in a few months, only 10 fathoms under surface, had produced so much ore, or a better prospect of opening a great mine. My own experience extends over a long period in most of our great mining districts, and I readily and unhesitatingly endorse my friend's opinion; while, at the same time, I may remark that I never knew of mining leases being granted on such favourable terms.

West Cork Mines.—During our recent visit to Glan Cove, South Berehaven Mines, &c., before leaving the Kilerohane district, we visited South Killeen, which is parallel with and adjoins South Berehaven, and according to the Ordnance Survey contains 361 acres, and is 1029 ft. above the sea level. This mountain range slopes to the south to Dunmanus Bay, and embraces Aughaleigue More, 285 acres; Knockroe, 281 acres; Dooneen, 164 acres; Kilerohane, 218 acres; altogether 1315 acres. This great mountain range contains unexplored lodes and mineral veins, cross-courses, &c., with ravines and lateral valleys, in which

water may be secured for driving machinery, washing ore, &c., while adits may be driven giving backs of 1000 ft. My attention was directed to a great lode containing quartz, and strong yellow copper ore cropping up in one of these mountain ranges at surface at a place called Cushagal, in the Knockroe sett; and in the Dooneen sett, in the cliffs at Coosavinna there are large east and west and caunter lodes in the cliffs containing copper ore, black oxide of copper, mundie, ferruginous quartz, gossan, &c. This little mineral territory is, I am informed, held by lease for 31 years, at a rent of 30*l.* a year, free of dues or royalties. The lease cannot be forfeited so long as the rent is paid. There is ample scope here for a number of mines, and if this great district were divided into ten good mining setts, 3*l.* a year for each would cover all liability to the landlord. This fact ought to induce *bona fide* capitalists to develop this mineral property. Here is a fair field for enterprise and legitimate speculation. I was accompanied in this mountain excursion by the oldest and most experienced mining authority in West Cork. He says—"There is no local enterprise, and if Englishmen begin to work an Irish mine they expect impossible results—that is, if the mine does not pay interest as soon as begun it is condemned. If one is discovered even near surface it must be dug out at once without allowing time for sinking shafts, driving levels, and opening the mine in a proper manner for permanent work and return." It is, he said, "carrying into effect the 'killing the goose that lays the golden eggs,' and that if a mine will not pay by a proper, systematic, and scientific plan of operations it will not pay by number and rule of thumb working." But surely, I remarked, no person ever saw or can expect a new mine to make returns and profits as soon as begun. "I can tell you for a fact," says my friend, "I have discovered splendid copper lodes in virgin ground in this country, and which, according to the judgment and experience of eminent miners, presented every indication of abundant success, would not be touched, because I could not guarantee before operations commenced certain returns and profits; and, in some instances where parties have been induced to open new mines, if they fail to become productive in a few months they are condemned, and those who recommend their being worked get well abused for their trouble. Tell the plain honest truth—that the indications in the lodes in a new mine warrant the expectations of success, and that it will take certain time and a certain amount of capital to develop the mine and bring it into a profitable state, and it would not be looked at; but promise great returns and profits immediately, which can never be realised, and parties eagerly rush in, and find out their mistake when too late." My friend pointed out to me great undeveloped lodes in the Kilerohane Mountains and cliffs of Bantry Bay and Dunmanus Bay, which, no doubt, if judiciously laid open would lead to profitable results. The natural advantages and facilities for working and the terms of the leases are exceptionally good. Let common sense be the guide, and let a reasonable time and amount of capital be honestly applied in the proper and systematic development, and the *bona fide* speculator would find himself in a much better position than those who deceive themselves and are deceived with expectations of returns and profits as soon as they begin to work. I shall probably visit other mining districts in West Cork, and let you know the result in due course.

ECONOMY IN MINE OPERATIONS.

In the present depressed condition of mining generally economy in every department has become a pressing necessity, and in nothing is there more room for this than in the system of supporting the roofs and sides. In some mines the cost of timber is a serious item, amounting to many hundreds of pounds yearly, and there is no doubt that a great saving in this direction could be effected at many places. A great deal of timber used for mining purposes when once placed is entirely lost, so that in some instances it has been considered desirable to substitute masonry for wood, despite the extra cost in the first instance. Even where timber is placed under favourable circumstances it has to be renewed every two or three years, whereas stone or brick may be looked upon as permanent. Cast-iron props have also been used, and with satisfactory results, especially at the bottom of shafts, where the tubs meet and pass each other, or in any open place where the miners frequently congregate. Now, however, a movement has set in, more especially in the Midland field, in favour of steel baulks and props, which are now being turned out in considerable quantities in the North of England, so that not only timber but iron is being superseded by the far more desirable material. One of the great advantages connected with steel is that it is not affected by the atmosphere or through inefficient ventilation. The iron in some instances is affected and corroded by the sulphurous acid contained in the smoke, and this is the case especially with the metal tubing which lines the shafts. The acid being absorbed by the moisture trickling down corrodes it, separating the iron from the carbon, and rendering the substance soft. Now, however, that steel is so cheap, there not being so much difference between the price of it and iron, there is no reason why in the future sinking of mines steel tubing should not be used. A segment of steel could not be weakened the same as iron, for the latter has been known to give way owing to the presence of the water behind it. In steel beams for mines instead of wood there is increased safety, whilst there is less room required with much greater strength. There is no comparison in the durability of the two materials, so that in the long run the steel would be found by far the most economical, a great saving being also effected in the saving of time in consequence of the metal not requiring to be renewed as in the case of timber. The same argument applies with equal force to props, which have to be frequently renewed when made of wood, for they are affected by the temperature and humidity of the atmosphere as well as the gases, which steel is not. It may therefore be fairly assumed that the heavy cost for timber in mines will be greatly reduced by the introduction of steel for nearly all purposes for which timber is now used.

MINE ACCIDENTS.—A serious accident occurred at the Phoenix United Mines, Linkinhorne, on Saturday (May 23). A young man named Frederick Clemo, who resides on the mine, was engaged in working a winding-engine, when by some means a pin in the well work, or condensing part of the machinery slipped out, and when in the act of repairing it by replacing the pin the engine started to work, which forced the steam and boiling water over his face and body, and scalded him very seriously. Dr. Moor, of Downgah, Linkinhorne, was soon on the mines, and did all in his power to ease the young man's sufferings, which were most intense for hours after the accident happened. Very little hope is entertained of his recovery.—On Friday (May 22) a man named George Talland, of Tremar Coombe, St. Cleer, was at work in a rise at the 160 fm. level in South Caradon Mine, near Liskeard, when the side gave way, and a rock fell and broke his leg below the knee, also injuring the lower part of his leg, it being very much bruised. He was soon conveyed to surface and taken to his home, where Dr. Nettle, of Liskeard, was quickly in attendance. The sufferer is progressing most favourably.—A miner named James Ingils was, on Tuesday morning, crushed to death while engaged in No. 7 pit, Cowdenbeath Colliery, near Dunfermline. It appears that Ingils had been employed digging underneath the coal, when suddenly a large quantity of the material gave way, and buried him underneath. Death was instantaneous.

Trade Reports.

NORTH AND SOUTH STAFFORDSHIRE.

May 28.—Notwithstanding that at some of the large collieries the production is about 30 per cent. under that ruling before the colliers' strike last summer the market continues over supplied with all classes of fuel. Under such circumstances it is impossible for prices to in any sort recover themselves, and as dead charges cannot be proportionately reduced with the lessened output owners' profits keep very fine. If the market were in a normal condition the small out-turn this week which has resulted from the holidays should have a beneficial effect upon the rates, but under present circumstances it is unlikely to influence the market to any favourable degree. At Cannock Chase forge coal can be had at as low as 5s. 6d. per ton, while in the Black Country 6s. to 6s. 6d. is the ruling price. Furnace coal is 8s. to 10s. The iron market this week has been flat, whether raw or manufactured sorts are referred to. Deliveries of the former are largely suspended this week, and new business is out of the question, since the consumption in the forges will this week be very small on account of the holidays. Northampton pigs range from 37s. 6d. upwards, Derbyshires from 40s. upwards, and hematites from 32s. 6d. and on. Native all-mines are 55s., and special qualities 57s. 6d. Part-mines are 40s. to 45s., and cinder pigs 35s. to 36s. 3d.; it is only during the latter half of this week that operations have been carried on at the manufactured ironworks, and even during this period scarcely half of the works have been running. The bulk remain closed down until next week. Prices of some descriptions of bars, hoops, and strips are rather firmer, but without quotable advance. Merchant sheets (singles) are 67. 10s. to 71., and boiler-plates are quoted 87. to 87. 10s., and best thin sheets 107. 10s.

CORNWALL.

May 28.—The delay in the advance of the tin standards in correspondence with the improvement in the metal market caused a good deal of disappointment, and some amount of feeling, but nothing practically is likely to come out of it, except the refusal last week of some of the managers to sell at the old rates. And yet something might surely be done, and now that mining men so generally have been politically stirred up to "dues on profits," need we utterly despair that they will show the energy and ability to go a little further? It is quite certain that no improvement will take place in the present methods of sale until they do. Generally speaking there is a maintained improvement with additional prospects in the share market, and this is showing itself also in a much needed advance in some localities in wages. There can be no mistake also in the fact that mining business generally is in a much more healthy state, so that adversity has not been wholly thrown away.

If any answer had been needed to the suggestion, once a great favourite in certain quarters, that the adoption of the ticketing would get rid of the present difficulties and anomalies attending the sale of tin, surely what took place at the Devon Consols meeting would afford it. So objectionable does the largest copper mine of the West find this ticketing system, that the leave of the Duke of Bedford is being sought—and we can hardly anticipate refusal—to a disposal of the produce in some other way. A limited number of buyers almost always in the end means "a ring." The misfortune is that in this case the remedy does not seem quite so easy of application as it really is in the case of tin. For a mine to smelt its own tin and sell it in the metal is a very small matter, though a great deal is made of it. But the reduction of copper ore is quite another affair, and as understanding at which even Devon Great Consols and its able Chairman might hesitate. It will be something, however, if this ticketing business can be put on a different basis. Of course in theory it is all right enough, but it works out very considerably in practice.

There seems to be a kind of understanding that of the eight gentlemen who were invited to stand as candidates for Ombudsman-Redruth, only two are likely to really enter the field. Mr. Tangye, Mr. Burnard, and Mr. Rows definitely declined at once, and Mr. Barker is regarded by many as out of the running. That leaves Mr. Vivian, Mr. Brett, Col. Fludger, and Mr. Conybeare. The latter has addressed the electors, and his thoroughgoing Radicalism has found great favour, especially his pronouncement with regard to mining legislation. But then Mr. Brett is fully abreast of the possible reforms of the present time, and his position as a local member would, if the choice lay between the two, undoubtedly give him the preference. Still it seems pretty well understood that Mr. Brett will not under existing conditions offer himself, and that the choice is practically between Mr. A. P. Vivian, and Mr. Conybeare—Colonel Fludger, with a spirit that does him honour, setting aside all personal considerations in the general interests of the constituency. We have yet to ascertain what Mr. Vivian's position exactly is; but he has strong friends, and if he comes up to the political standard of the times it is very probable that as an old member, who has never swerved from his Liberalism, he will be chosen.

One thing strikes us as very unfair to him. Some of the electors who are loudly insisting that dues ought only to be levied on profits now, are those who have steadily discountenanced all efforts in this direction in the past. This particular point of mining reform, in fact, has been advocated in this column for years; but it has never been taken up, up to the present moment, by the leaders of mining opinion in this county, and how they can blame Mr. Vivian it is hard to see. He certainly has been quite abreast of them, and ahead of several who have been able to think of no better remedy than an advocacy of Fair Trade.

In the Truro-Helston district there is a good deal of division on the Liberal side, and the only way to heal it seems to be the choice of a third candidate. Mr. Brett would be acceptable both to the friends of Mr. Brydges Williams and Mr. Bickford Smith.

The annual exhibition of the Royal Cornwall Polytechnic will open this year somewhat later than usual at the Polytechnic Hall, Falmouth, on the 22nd September. Among the special points of interest in connection with mining affairs noted in the prize list there are:—The best safety appliance for securing skips or cages adapted for use in Cornish mines; the best method of construction of Cornish boilers—having in view the lessening of the corrosive effects of impure water; the best non-conducting material for covering boilers, cylinders, and steam pipes to be tested in competition, as to its waterproof qualities, efficiency in resisting radiation, facility in use, durability, and economy; improved stamping machinery; improved machines for, or modes of, dressing ores; collections of ores and matrices, in which the relations of one to the other are carefully marked; and cross-sections of Cornish mining districts. Then there are special premiums for the following subjects:—Three offered by the Editor of the *Mining Journal* for the best papers by practical miners or others engaged about mines, upon a method, mechanical or chemical, of making marketable with commercial advantage ores or minerals raised from mines in Cornwall or Devon, and hitherto regarded as worthless. A joint premium by Col. Tremayne and the Society for the most exact account of the phenomena of mineral veins in any mine or district; their dip, direction, variation in productiveness, slides,

heaves, &c. A premium offered by the Society for the best essay treating on the reasons for the diminished duty of Cornish pumping-engines, and giving practical suggestions for its improvement.

The programme for the Department of Chemistry and Electricity includes prizes for analyses of minerals, for monographs on any groups or families of salts, for collections of artificial crystals, and for any new and successful experiment in the application of the electric light for use in mines or otherwise. In the section of Natural History we may also mention a premium offered by Mr. A. L. Fox for the best collection of Cornish fossils, to be accompanied by descriptions. Seeing the character of what we may call the practical part of the programme, and taking into consideration also that there will be no other exhibition in the county of kindred character this year, the Polytechnic meeting ought to be of unusual interest, and at any rate local value.

The failure of Mr. W. H. Rule has not been a matter exciting a great deal of surprise. It was perfectly well understood that at one time he had realised a handsome fortune by his speculations, which at the outset were attended with singular good fortune. For a long while, however, the tide has been against him, and it is rumoured that his losses, which are very heavy, are not altogether confined to mining speculations. According to report, his banking debts are of a very serious character.

DERBYSHIRE AND YORKSHIRE.

May 28.—The week has been a quiet one at the mines and ironworks in Derbyshire, consequent upon the holidays, which amongst the works take precedence over all other matters. The trade, however, has been in that state that a stoppage of work for two or three days is by no means an inconvenience, but in a good many instances the reverse. For the time of year the leading collieries have done a tolerably fair trade, but now a change is imminent that will lead to less time being worked, and that at reduced wages. It is evident that the strike of miners in South Yorkshire is now all but over, for during the week about 5000 of them have agreed to resume work at the proposed reduction. This cannot fail to affect the business doing at the Derbyshire collieries to the London and other markets, for it must divide the trade. Prices, there is also every reason to believe, will come down to an exceptionally low point even for the summer months, so that the prospects of the next three or four months are anything but bright. But in addition to the depression and low prices of coal which are likely to prevail, the wages of the Derbyshire miners will be reduced almost immediately. When notices of a 10 per cent. reduction were given to the men at the West Riding collieries, similar notices were issued by the leading mineowners in Derbyshire. These were afterwards withdrawn, the men agreeing to accept the same conditions on which work would be resumed by the men on strike in Yorkshire. Already a large majority of the latter have accepted the masters' terms and commenced work, and those connected with the Derbyshire collieries will now be expected to do the same. This they no doubt will do, for the association is not by any means so well off as the West Riding Miners' Union was when the strike commenced, and what the result has been the miners all over the country now know very well.

During the early part of the week but little coal comparatively went from the Derbyshire pits over any of the lines of railway, so that there were pretty clear roads for the ordinary passenger and excursion traffic. The merchants in the Metropolis have purchased somewhat sparingly of late, for they evidently consider that the price of house coal must come down whenever the men on strike commenced working. This, indeed, is sure to be the case, for house coal promises to be a drug in the London as well as other leading markets, even when the collieries are working short time, which is likely to be the case with most of those in the Midland field. The demand for steam coal has continued tolerably good, and now that the Baltic trade has fairly opened out it remains to be seen whether the colliery-owners of Derbyshire and Nottinghamshire will avail themselves of the facilities offered to them by the Great Northern Railway Company of carrying coal to Boston at a moderate rate, and from which it could be shipped from the docks to either home or foreign ports. There is no reason why a good trade should not be opened out with the Baltic, for the hard coal from the counties named being well suited to the requirements of the ports connected with that sea. The opening out of several collieries in South Yorkshire has already given an impetus to the steam coal trade at Hull in particular, although a good many vessels have had to go to the Tyne and Wear to be loaded, as well as to take in supplies for their own requirements. The Hull and Barnsley Railway is now all but completed, and on Monday a train went over the line from the dock at Hull to the terminus at Starfoot, near Barnsley. It is proposed by the directors that a very large tonnage of coal shall be carried from the South Yorkshire collieries to the dock at Hull, and shipped from there to London. Yet there is no reason why coal should not be shipped to the Metropolis from Boston, which is so much nearer to the Thames than any of the Humber ports.

The production of pig-iron in Derbyshire for some time past has not been so large as it was, several of the furnaces being out of blast. The demand, however, has scarcely kept pace with the production, more especially as regards forge qualities for Staffordshire. The local consumption of foundry pig has not turned out to be so good as might be expected for the period of year, when there is usually a heavy demand for pipes and other kinds of large castings. But there is every reason to believe that the pipe department at the leading foundries will improve, seeing that the weather is now most favourable for the laying of mains for gas and water. At the forges along the Erewash Valley business has ruled somewhat moderate, but an improvement is now looked forward to. In the South Yorkshire district the make of pig is considerably below what it was not so very long since. The furnaces at Elsecar and Milton are still standing, and there is no appearance of their being again in blast, although they are most favourably situated, being in the centre of an important coal field quite close to several collieries, at no great distance by railway from extensive fields of ironstone, and having the advantage of canal accommodation to the Humber, as well as a line of railway having connection with all parts of the kingdom. There are also mills and forge appliances of all kinds of the most approved kind, all that is required being an active and practical tenant.

Trade in Sheffield has undergone but little change since previous notice, and several of the light branches are still quiet. The Government orders have, however, improved some of the heavier ones. Armour plates are being briskly turned out, and the orders in hand at the Atlas and Cyclops for the new war vessels, for which orders have recently been given out, will keep this department busy for a considerable time, some of the contracts extending over a period of two years. In common plates there is not so much doing, for even for boiler purposes steel is rapidly superseding iron. Makers of steel, indeed, are likely to have a busy time of it, for a good deal will be required in the construction of the new armour-clads, as well as for the engines, boilers, and machinery. Not so much has of late been done in some kinds of steel wheels, picks, and other kinds of mining tools, but an improvement in those branches is now confidently looked forward to. Bessemer steel has not fallen off, some of

the rail-makers being tolerably well off for business, whilst a steady production of railway and other forgings has been the rule. Table and other cutlery has undergone but little change, the demand being moderate, except in the case of a few specialties. The American business in general hardware has not altered much, but an improvement is now anticipated. In sheep-shears, the makers are now doing well, principally for Australia and some other of our colonies, whilst the business doing at home in ordinary kinds, as well as scissors, is looking better. In edge tools the trade is still moderate, but there appears to be more doing in the heavier machine kinds.

NORTH WALES, SALOP, AND CARDIGAN.

May 28.—Considerable distress prevails among the working population of Mostyn, Flintshire, owing to the drowning of the Mostyn Colliery and the stoppage of other works. Many of the men have left for other fields of labour. Arrangements have been made between Lord Trevor, of Brynkinnall, with other landed proprietors and the Presgwyn Colliery Company, for the working of coals under lands considerably to the east of the present workings by means of a tunnel to be driven from the present colliery workings. This is a good thought, the extension will be in the direction of the land which was intended to be worked some 12 years ago by the then Ifton Rhyn Colliery Company. The coal field of the near future lies in this direction. Generally speaking, the Coal Trade is quiet, although not unusually so for the time of year.

The Iron Trade is also quiet, although at the works in Shropshire there is a fair demand for the best qualities of iron.

It was thought some time back that the promoters of the three Bills for the improvement of the navigation of the estuary of the Dee had come to an arrangement by which the whole of the Bills would be dropped for the present session, and a joint Bill brought in next. It appears that this arrangement fell through. On Tuesday, the 19th, the Select Committee of the House of Lords, presided over by Lord Jersey, rejected the Bill known as the Wrexham Bill, promoted chiefly by Wrexham gentlemen connected with railways; and on Wednesday the same Committee passed the Bill promoted by the River Dee Company jointly with the Corporation of Chester. The Committee had inserted in the Bill provisions whereby the northern bank of the river should belong to the conservators, and that the latter should have power to take stone at a royalty of 2d. per ton. The clauses relating to ferries and tolls were passed as they stood in the Bill. The week before the River Dee Company succeeded in lowering Lord Wenlock's claim against it for 175,000l. to 25,000l. This money is to be vested in a Conservancy Board for the purpose of constructing numerous engineering works which are contemplated.

It cannot be said that the relations between employer and employed at the Great Penrhyn Slate Quarries, in Carnarvonshire, are of the most satisfactory kind. A very uncertain and unsettled feeling prevails. There is also a strong impression that this state of things is owing in great part to the strong divergence of political feeling between the owners and those in authority and the workmen. Several of the latter have already left for America. At the other quarries the men are working steadily, and the trade is fairly good. With the opening of spring it is better in the Festiniog district.

The Chester Society of Natural Science visited the Vale of Llangollen, on Thursday, when considerable interest was taken in the bold escarpment of carboniferous limestone known as the Eglwysg rocks. In Shropshire there is a little revival through the resumption of smelting operations at the Snailbeach Mine, but there is but little hope for the resumption of extensive mining operations throughout that district.

The Bill for the furtherance of intermediate education in Wales, recently introduced into Parliament, seems to give general satisfaction. When this Bill becomes law the educational provisions for the Principality will be very complete.

The marriage of the daughter of Mr. J. C. Edwards, of Trevor Hall, took place last week. Mr. Edwards is the father and founder of all the higher applications of the clays of the coal measures to architectural and sanitary purposes in the district, and he is the proprietor of the Trefnant and Penybont Works. The occasion was, therefore, made use of to express in various ways the esteem with which Mr. Edwards is regarded in the neighbourhood of Ruabon, Cefn, and Llangollen. The case of the Lovatt peerage reads like a romance. The present claimant, Mr. John Fraser, of Carnarvon, is the fifth mining man in regular descent from the Alexander Fraser who started the Parys Mines, and through whom the estates and peerage are claimed.

LANCASHIRE.

May 28.—During the past week, with collieries and works generally closed for the Whitsuntide holidays, there has been very little real attempt at business. The recent keen competition of one or two district brands of pig-iron has forced a little giving way in price on the part of local makers, and at the reduced rates, representing about 30s. for forge, and 30s. 6d. for foundry, less 2½ delivered equal to Manchester, which they are now prepared to accept. Lancashire makers have been able to secure some small weight of business that was previously being held back. They are, however, still being undersold by Lincolnshire iron, which, although not being actually offered at quite such low figures as were being taken last week, is still to be got at fully 1s. per ton under the lowest prices quoted for local brands. For delivery into the Manchester district the prices quoted for district brands range from 38s. 6d. to 39s. to 40s. 6d. and 41s., less 2½ per cent., but so far as any business doing at these figures is concerned they are practically only nominal. In fact, the large users of pig-iron are so fully bought that where they are tempted to give out orders, it is only at extremely low figures, and business of any weight that is at present being done is at prices that have little or no relation to the nominal list rates quoted on the market. In the manufactured iron trade there is only a small business doing. Makers of the better class Lancashire and North Staffordshire brands still hold to 57. 7s. 6d. per ton as their quotation for bars delivered into the Manchester district, but a want of firmness is very largely apparent in the market, and for anything like good orders for prompt delivery there are plenty of sellers who are prepared to come 1s. or 1s. 6d. per ton below the above figure.

In the Coal Trade there has been a little extra push for house fire classes of fuel in anticipation of the usual stoppage of regular supplies during the holidays, but with this exception trade generally is dull, and although prices are without material change as regards any further announced reduction, the tendency of the market continues downwards. In a few exceptional cases 9s. is still being got for the best Wigan Arley at the pit mouth, but 8s. 6d. is now the average basis on which sales have to be made; second qualities of Arley and good ordinary qualities of Pemberton Four-feet can also be got readily at 7s. per ton, and it is only for a few special sorts that prices are maintained above this figure. Common house fire coals fetch about 5s. 6d. to 6s. per ton at the pit. Common round coals for steam and forge purposes, which are a drug on the market, have to be sold more at the price that buyers will give than what sellers quote, and they do not average more than 5s. to 5s. 6d. per ton at the pit; engine classes of fuel, which are also plentiful and slow of sale

average 4s. 6d. to 4s. 9d. for burgy, 3s. 9d. to 4s. for best slack, and 2s. 9d. to 3s. per ton for common sorts at the pit mouth.

In the Shipping Trade there has been a moderate business doing, but the prices at which orders are taken are very low. Good ordinary qualities of Lancashire steam coal, delivered at the High Level, Liverpool, or the Garston Docks, not averaging more than 6s. 9d. to 7s. per ton.

TYNE AND WEAR.

May 28.—There is still a strong demand for best steam coals and other classes of steam coals also. Most of the works north of the Tyne are consequently well employed, and 9s. 8d. per ton net has been realised for some of the highest class coals. There is a good demand for bunker coals, and for steam small coals, nuts, &c. There are now many heavy coal contracts in the market for steam coals for railway companies, and for gas coals, &c., including 100,000 tons for the Bristol Gas Company. The shipments of steam and other coals to the Baltic and other foreign districts are now expected to be large. In Durham only the first-class gas and coking coal collieries where large contracts for the produce are held are fully employed. The bulk of the collieries in the county are, however, fairly employed. The shipments of coals and coke at Tyne Dock were for the week 120,878 tons, showing the very large increase as compared with the corresponding week of last year of 23,000 tons.

The North-Eastern Railway traffic receipts for the last week amounted to 121,296l., the return being one of the best for the half-year, all branches of receipts, with the exception of the mineral traffic, showing a very satisfactory increase—the total increase for the week being 1932l.

The Iron Trade continues in an extremely depressed state. The returns of the accountant for the months of March and April have been published, which shows that the net average selling price of manufactured iron for that period is 4l. 17s. 11d. This is the lowest price ever given either during this or any other depression. A lower average has been reached than in the worst times of 1879. The average price is now 6s. 4d. below six years ago; 5l. 3s. 3d. was the lowest price recorded in 1879, and now the price is 4l. 17s. 11d. This return has no direct bearing on the wages rate, as the sliding-scale has not yet been re-established. It was expected that the Board of Arbitration would have endeavoured to formulate a sliding-scale, but this has not yet been effected. The reduction in the value of this iron in two years and four months is 1l. 10s. 7d. per ton. It is hoped that the next return will show some improvement, as there has been a better demand for shipbuilding lately, and some improvement in prices. The output of iron has fallen far below what it was 18 months ago, when the demand was good for shipbuilding. The shipments of pig-iron to the Continent continues small, and a small demand from that quarter is expected this summer. There is, however, a better delivery of manufactured iron, and the shipments of finished iron and steel are good. Steel rails are in better demand. Prices at present are—Ship-plates, 4l. 17s. 6d.; common bars, 5l.; pig-iron from makers is 33s. 8d. for No. 3. There is no change in the stock held by Messrs. Connal and Co. There is an improvement in the lead trade, and better prices have been got lately for the finest brands. The shipments of fire-bricks and other fire-clay goods continue on a large scale.

SOUTH WALES.

May 23.—The Steam Coal Trade of the district continues extremely active, and merchants have some difficulty in many instances in avoiding demurrage. Although the contingency of war with Russia is generally believed to have passed away, others are of opinion that we are only negotiating a truce, and that war will eventually be the upshot of present complications. This may partly account for the immense quantities of coal being shipped to Bombay, Turkey, Malta, Smyrna, Gibraltar, and eastern parts generally. Last week Cardiff sent away 171,736 tons foreign, and about 22,000 coastwise, with 3951 tons patent fuel. Newport, 34,440 tons foreign, and 26,006 coastwise; Swansea, 18,393 tons foreign, and about 11,000 coastwise, with 6364 tons patent fuel. House coal remains in good demand, owing to the continued cold weather, while patent fuel and small steam coal maintain their usual activity.

At Ynysybwl it is anticipated that the coal will be reached in a few weeks. At Penrhinwceiber work is so active that 1400 tons of coal are daily brought to bank.

The Steel Trade is considered to be, on the whole, a little healthier. Cyfarthfa has sent away the first consignment of steel rails since the adaptation of the works, consisting of 20 wagon loads. Newport exported last week 1300 tons to Sundswall, 1300 tons to East London and Port Alfred, and 1153 tons to Messina. The arrivals of iron ore have been large, consisting of 10,582 tons at Newport from Bilbao, and 1825 tons from other places; Cardiff received 9338 tons from Bilbao, and 2630 tons from other places.

Prices remain low in the Tin-plate Trade, good coals fetching only 13s. per box. Manufacturers are not agreed upon the question of closing the works, as higher prices would bring about the re-opening of some of the closed works, and so create greater competition.

FOREIGN MINING AND METALLURGY.

The question of the formation of a metallurgists' syndicate is being a good deal discussed in France, but at present no definite result has been arrived at. Meanwhile a good deal of attention is being given to the details of a corresponding movement in Germany. The Paris iron market appears to be becoming weaker if anything. Old rails have been disposed of with difficulty at 3l. to 3l. 4s. per ton. In the Nord some rather important transactions are said to have taken place in merchants' iron at 5l. 8s. per ton. A want of orders is generally complained of in the Nord. The works specially equipped for the production of railway plant are almost without orders. The bolt and nut works are reported to be in almost an equally unfortunate plight. The Cail Company has obtained an order for artillery, in competition with Krupp, of Essen. Bange guns would seem to have been preferred to those turned out by the redoubtable Krupp. The order is not without importance, comprising as it does 306 guns with all necessary accessory matériel. It was not only the excellence of the Bange cannon which led to the order being secured by the Cail Works, but the Cail prices were also nearly 50 per cent. below those required by Krupp. The intelligence available with respect to the German iron trade is little favourable. The reports to hand from Silesia are especially discouraging. Some orders are reported to have been secured by Westphalian rolling mills.

The tone of the Belgian Iron Trade, instead of being benefited by the turn taken by political events during the last week or two, has become rather weaker if anything. There has certainly been no change in the semi-official quotations current; but these quotations have at the same time been scarcely so firm, and they have indeed been to some extent nominal. Consumers only lay in supplies when obliged to do so by their immediate requirements, and these requirements have been of no great importance of late. The Belgian forges have been only moderately well employed. There has been a good deal of talk of a contract for 7000 tons of girders having been offered to certain firms, but

nothing definite has transpired upon the subject. Meanwhile there has been great competition for orders for girders, and prices have been reduced to such a comparatively profitless point that the formation of a syndicate—the favourite device of the period—is recommended. A contract of 700 tons of girders is stated to have been taken at 3l. 18s. or 4l. per ton, deliveries to be made at Antwerp. In the construction workshops there have been comparatively little doing, especially as regards railway matériel. Locomotives may be said to form an exception to this remark, as the demand for them has continued to a fair extent.

The aspect of the Belgian Coal Trade is still far from encouraging. Out of 50 collieries which are in operation in the Liège basin it is stated that only nine are now being carried on at a profit, and these are only distributing small dividends to their shareholders. The remaining 41 collieries are making no profits and appear to be contenting themselves with simply exhausting their concessions. This adverse result is, of course, attributable to the low rates current for coal, which have been aggravated by the mildness of recent winters, which has checked and reduced the demand for household coal. In the Couchant de Mons the state of affairs is not much better, but coke and industrial coal have been rather better supported. At Paris, as well as in the great French coal mining centres, the attitude of the French coal trade is one of expectation. Orders for coal for the winter scarcely make their appearance in France before July or August, and there is reason to apprehend that this autumn orders of this description will not exert much influence upon quotations. The Paris, Lyons, and Mediterranean Railway Company has just prepared a new tariff for the conveyance of coal to Switzerland; the Gard district will especially profit from this measure. The coal-owners of the Nord and the Pas-de-Calais are complaining that they cannot obtain from the great railways tariffs which will enable them to compete seriously for orders in Italy. The coke manufacturers of the Dortmund district have held a meeting to arrange for a reduction of production. A proposed syndicate has already received 90 per cent. of the necessary "adhesions."

THE TREATMENT OF GOLD QUARTZ.

The great and ever increasingly felt want of adequate supplies of gold, and the increasing value of that metal in comparison with silver, has tended, and must constantly tend, to raise quartz reef mining—as a permanent industry—in public estimation, and of later years (alluvial gold mining being comparatively exhausted) this has been the favourite channel by which the speculative public have invested their money. Quartz reef mining there can be little doubt will be an ever-increasing industry in the future. Very great disappointment is constantly experienced by investors and capitalists whose mines, though producing really rich ores, prove indeed that the gold is there, but that it is nearly impossible to win it. In some cases it is associated with base metals, in others it is in such fine particles that it apparently can not be saved, and the most ingenious metallurgists, engineers, and chemists have devoted their best abilities, and have in some cases spent their lives, in the endeavour—more or less successful—to devise a means and cheap and portable machinery capable of extracting a satisfactory percentage of the gold, which, by crushing and pulverising the ores, it is the endeavour of the quartz reef miners to set free and secure. Perhaps one of the best machines calculated for treating such ores, and especially those with much fine gold, is that so appropriately designated the "Quicksilver-Wave Amalgamator." This machine, besides combining within itself the advantages above enumerated, possesses many superiorities which place it far above the ordinary crude and inefficient instruments so ostentatiously displayed to gold mining companies; its wave-like motion is peculiarly adapted to retain float or flour gold, which is caused to eddy about the head of the amalgamator until such time as it is forced into contact with the mercury. Again the important fact that gold can only be absorbed by the quicksilver when it is free from any film of oxide or dirt is so well recognised by mining men that it is quite unnecessary to assert it, and it is here that the Wave Amalgamator is pre-eminent, because the rusty gold being in grains usually large enough to sink and rest immediately on the mercury is thrown by the successive waves (raised by the horizontal movement) towards the head of the machine until the attrition thus induced has scoured away the film and allows the mercury to seize the golden particles. It is generally admitted amongst gold metallurgists that in the reduction of gold ores the average amount of gold recovered does not exceed the moiety; it is then self-evident that a machine which could obtain three-fourths and upwards of the metal would be the salvation of numerous mines struggling for existence, and would largely increase the dividends of prosperous companies. In California alone during 33 years the moiety (on which it should be recollected the mining and hoisting charges have been paid) would represent the enormous sum of nearly 250,000,000l. sterling. When refractory or pyritous ore is sufficiently reduced in size the Wave Amalgamator claims to save 85 to 90 per cent. of its auriferous contents, and to save 90 to 95 per cent. of the gold in free milling ores—as shown by fire assay—and at a cost not exceeding 1s. per ton. The machine has also the great advantage of being light and easily transported on mule back or otherwise, and of being erected in a few hours, and what is by no means an unimportant matter of requiring little or no alteration of existing plant. The smallest machine when complete weighs only 15 cwt., and occupies a space of only 9 feet by 3 feet, and is capable of treating 10 tons of pulverised ore daily. We are pleased to understand that the Amalgamator has been adopted in most auriferous fields, and has proved uniformly successful, also that arrangements are being made with the Hungarian Government to introduce it into their Transylvanian gold reduction works. The machine indeed appears to possess so many concurrent advantages that its use cannot fail to secure a bright future, and promises to prove quite an era in the economy of gold mining, whilst the immensely increased yield of gold to be secured will tend to greatly increase the commerce between nations. We also learn that the manufacture of the Quicksilver-Wave Amalgamator has been taken up in the United States by Messrs. Beckett and McDowell, of Arlington and New York—among the most eminent mining machinery manufacturers in America.

THE BUTE DOCKS.—The arrivals of registered tonnage for the past four weeks at the Bute Docks have been greater than for any other four weeks on record. On one day no less than 32,373 tons register of shipping entered the docks, and on the following day 23,003 tons register were admitted, making a total equal to a carrying capacity of 110,000 tons in two days. So great has been the demand for coal tips that steamers have been delayed some time, and coal shippers are anxiously awaiting the opening of the new dock. It is said that the coal shipments for the past week at the Bute Docks have reached the great total of 150,000 tons. It is also stated that the import trade is somewhat brisk, so much so that the Bute Dock authorities are sorely pressed for warehouse accommodation, as also for quay room for stacking mining timber, &c. Penarth Dock has also been very busy, and we are told that in one week recently as much as 70,000 tons of coal have been shipped, and as great a quantity as 14,000 tons in a single day.

Meetings of Public Companies.

THE AKANKOO COMPANY (LIMITED).

The first meeting of shareholders was held at the Cannon-street Hotel, on Wednesday.—Mr. MAURICE GRANT in the chair.

The CHAIRMAN said that under the Articles of Association they were required to hold two meetings in each year, and it seemed a convenient time that the first meeting should be held simultaneously with Mr. Harvey's return, so as to accomplish both objects at one sitting. He would ask Mr. Harvey to make a statement, and then, when Mr. Harvey had concluded, he would trouble them with a few remarks about the financial position of the company. Since the last meeting they had lost, by death, one of the directors, Mr. Wise, who died suddenly. Mr. Wise was at the board three days before his death. He wished to testify his high respect for Mr. Wise's character during the short time he had business relations with him. Mr. Wise was a firm believer in this mine and a large shareholder, and also took up his proportion of the debenture stock, and supported the company in every way. He regretted his death extremely, and he was sure all the shareholders would sympathise with his family. (Hear, hear.) He congratulated the shareholders on the happy return of Mr. Harvey, who had been on the mine. It was not a mere figure of speech to say that the Gold Coast was not the healthiest in the world. By the papers of that day they would see that the Governor of the Gold Coast had died from fever; therefore he congratulated Mr. Harvey upon his return, and upon the fact that he had done the work which the shareholders had asked him to do, and Mr. Harvey would give an account of his stewardship which, he was sure, would be to the satisfaction of the shareholders. (Hear, hear.)

Mr. C. J. HARVEY said it afforded him great pleasure once more to have the opportunity of meeting his coproprietors and give them an account of his stewardship. They would remember that when they last met some strong remarks fell from the lips of the outgoing directors as against the incoming directors, and the shareholders were told they were handing over their property principally to the vendors, and the vendors were supposed not to be the right sort of people to watch over and care for the property. He hoped those remarks were the last they would hear on that particular subject, because, as he told them at the time, that although he was interested in the mine, if his services were not worthy of the esteem and respect of the shareholders he would resign his position they had placed him in. After one or two more preliminary observations, Mr. Harvey proceeded:—At the close of last year I received your instructions to proceed to the West Coast of Africa for the purpose of ascertaining the position of affairs at the mine, and to devise such means as might be desirable for opening and developing it in the most efficient manner. Arriving at Axim on January 3rd, next morning, in company with Mr. Louis, acting manager, I proceeded to the mine, where we arrived at 3.30 the same day. Since then I have resided more than two months on the property, and having made myself thoroughly acquainted with the details of the company's operations, have now pleasure to hand you my report. Although the reef has been fairly opened by cross-cuts and levels, little had been done to prove its value in depth, one winze only having been lately started. Two more winzes were commenced as soon as possible, with the object of ascertaining the value of the reef below level before deciding on any plan of development requiring additional expenditure. Some difficulty was experienced in sinking the winzes on account of water, and they had to be abandoned after being sunk 24, 23, and 34 ft. respectively, the latter being through old ground. During the sinking of these winzes frequent trials were made of the quartz, and the results obtained being considered satisfactory, preparations were at once made for sinking a main shaft. Unfortunately, the first crushing from the winzes was disappointing, and created considerable anxiety as to the value of the reef in depth. It was then determined to have a trial crushing from the prospecting shaft, which had been cleared out, and respecting which much uncertainty existed. The results obtained from this trial were exceedingly satisfactory, and far in excess of what had been anticipated, at once dispelling all doubts as to the value of the reef—8 tons 14 cwt. of quartz from a reef over 3 ft. thick giving 9 ozs. 13 dwts. 16 grs. of gold, equal 1 oz. 2 dwts. per ton, whereas 20 tons 4 dwts. of quartz from Nos. 1 and 2 winzes produced 6 ozs. 18 dwts. 2 grs. of gold, being under 7 dwts. per ton. The total explorations below the adit level produced 28 tons 18 cwt. of quartz, yielding 16 ozs. 11 dwts. 18 grs. of gold, giving an average of over 11 dwts. per ton, an excellent and very profitable yield. This quartz obtained from three winzes below adit, where the average thickness of the reef is about 4 ft., is a good illustration of its variable character, which not even the most careful examination can detect. The main shaft at the date of my departure was about 50 ft. deep, the coming water being kept by buckets. To expedite this work a small engine has been purchased, and will be fitted with temporary winding gear as a makeshift until a winding-engine is obtained. As the sinking of the shaft progresses we must expect to cut more water, especially on nearing the reef; arrangements will, therefore, be made at an early date to have proper steam pumping gear fitted in the shaft before approaching the reef. In the meantime it is believed the small engine will enable the shaft to be sunk to the required depth—say, 120 ft., while the pumping and winding gear are being erected, when the reef will be cut by a cross-cut at 100 ft. below adit level. The stamps mill engine is now in good working order, but wrongly and inconveniently placed in close proximity to the stamps. The three boilers supplied with this engine (admirably adapted for coal) were of little service for wood, a serious oversight, which has caused much trouble and loss of time, it being impossible to keep 10 head of stamps working more than half speed. As soon as Roots' boiler was erected a marked improvement in the speed and duty of the stamps was perceptible. Some idea may be formed of the admirable position of this property on the bank of the Ankobra river when I state that this boiler arrived at Axim January 16th, was on the mine on the 20th, erected and at work on the 5th of February, notwithstanding Mr. Thorpe, the company's engineer, was several days down with fever. The 20 heads of stamps are erected and ready for work, but they are not so heavy as I expected, therefore the duty per head will be less; when the whole are in full work the crushing power may be estimated at 50 tons a day. I observed that the framing of these stamps is lighter than usual. It was absolutely necessary to reconstruct the whole of the hopper work; as erected it was useless for the purpose intended, and although timber was imported for the purpose it was about the worst piece of work of the kind I have ever seen erected. I regret to state the re-construction of this work has been delayed for weeks, on account of the men being down with fever. At the date of my departure all were fairly well, and it was expected that all would be complete and in working order at the end of April or early in May. The elevator, which must have been intended for lifting grain instead of quartz, although erected was never put to work, all the quartz from the stone-breaker being lifted by hand windlass into the hoppers, so that before the quartz reached the mill it had to be handled some four or five times; the labour expended on such a system may be imagined. Under the new arrangement the quartz from the adit levels will be raised to the stone-breaker floor by stamps engine, and from stone-breaker into the hoppers, which will be made self-feeding. When the shaft and tramway are completed the quartz will be delivered direct to the stone-breaker. The gold saving appliances adopted by Mr. Louis for this class of ore are, in my opinion, nearly perfect. Later on, when the mine is in a position to make returns, I would suggest that new stamp boxes be obtained, which will render the gold saving appliances still more effective. There being little or no sulphurets in the quartz the reduction process is simplified, concentrating machinery being unnecessary. It is possible the character of the reef may change in depth; at present the product of the reef is a free milling quartz. Tramways and the completion of the extension tunnel enables timber, firewood, and materials to be conveyed to the works at a minimum of cost. Arrangements are being made for the

firewood to be cut and delivered by contract, and wherever possible other contracts will be arranged. I have traversed the centre and greater portion of the boundaries (the northern not being cut), but only in one instance—on a low hill near the southern boundary of the concession—were any indications of auriferous quartz met with. As soon as an opportunity offers this as well as the ranges west and south-west of present workings on the Akankoo reef should be explored. Subject to confirmation I have appointed Mr. Louis manager—a position for which he is well qualified—to assist him Mr. Thorpe, an able and efficient engineer, with an assistant but lately arrived; Mr. Amundsen, for launch, transport, and surface work; Mr. Drew, an able carpenter, and two good miners. Dr. Nealon, medical officer, has undertaken the additional duties of accountant, which will facilitate the office work, it being found that the native clerk, a very good man, who will still act as storekeeper, &c., was not quick enough for this work. Although few in number, your European staff is sufficient for all present purposes; later on a mine agent will be required. A steadier or better staff I have rarely met, and it affords me pleasure to be able to record my unqualified approval of the conduct of officers and men. Every endeavour is being made to train native labour, and I am pleased to say it is proving successful, several being now in the employ of the company. Before concluding this short outline of the company's operations let me review position and prospects. The reef is opened by cross-cuts and levels, a few thousand tons of quartz are available for extraction at a minimum of cost, and the reef has been proved to be over 3 ft. wide 30 ft. below adit level. On surface about 1000 tons of quartz awaits milling; tramways are laid for conveying materials, timber, and firewood to the works; a steam saw bench is in operation; a steam launch, lighter, and surf boats for transport of stores, &c., from the coast. Twenty head of stamps will shortly be ready for work, and excellent dwelling-houses for the officers and men. A large expenditure has been incurred on these several works, and the opening of the mine unfortunately neglected. A further expenditure for this purpose must be incurred, and while this is in progress let us ascertain the probable output and yield of the milling operations per month. The mill duty, in full work, is calculated at 40 tons a day—25 working days per month will be 1250 tons, but allowing for contingencies (say) the output is 1000 tons per month, at 6 dwts. per ton, the lowest yield yet obtained, will give 300 ozs. of gold per month. It must be remembered that the reef from which these returns are anticipated has already been extensively worked by the natives, but there is reason to believe some of the better portions may have been left, in which case an increase of 1 dw. or more per ton may be looked for. When the reef is opened below adit level I estimate the return will be 10 dwts. per ton, and it is possible this yield may be exceeded when the reef is laid open for stoping, it being evident by the trial crushing from the prospecting shaft that some portions of the reef are very rich. Although some time must elapse before mining operations below adit level are in complete working order the prospect of the mine being able to pay its way during the progress of this work is a most important feature. If all goes well at the works milling operations will be resumed early in May at latest, and we may look to have results of first month's run with 20 stamps about the end of June. In conclusion, the company are in possession of one of the best properties on the coast with unequalled facilities for working, and judging from the prospects obtained below level of adit, I look for a long and successful career, it being well known that few investments are so remunerative as an auriferous reef favourably situated yielding 10 dwts. of gold per ton if properly and efficiently worked. (Cheers.)

The CHAIRMAN said he would supplement what Mr. Harvey had told them by the necessary figures, in order to enable them to understand the present position of the company from a financial point of view. Personally he was quite satisfied and pleased with the report which Mr. Harvey had given them. They had crushed 900 tons of ore, and from that quantity there had been 300 ozs. of gold sold in London. They were fortunate in having a man like Mr. Harvey, with 40 years' mining experience of gold mining, who told them they need have no fear now but what they would have regular and steady returns of gold. From the ore above the tunnel they would get about 300 ozs. of gold per month, and when they got below the shaft to the richer ore they might expect still better results. Having given some figures referring to the probable yield of the mine, which were corroborative of those given by Mr. Harvey, the Chairman went on to place before the shareholders the financial position of the company. When the present directors took office six months ago they had 2200l. in hand, and since then they had received 1100l. for the gold sold, and 3600l. paid up for debenture stock, and a further small sum of 200l.; therefore, the total amount was 7155l. That amount had been spent as follows:—Machinery, 740l.; general expenses on the mine, provisions, wages, and so forth, 4122l.; and they had sent in coin to the mine to pay the labourers 1600l., making 6462l., leaving in hand at the present time about 700l. They had certain liabilities amounting to 250l., so at the present moment they had about 400l. available. There were certain calls which could be called upon in connection with the debenture stock already subscribed. There was a call which would fall due on the 15th June of 1700l., which with the amount already in hand would give 2100l. to carry on work at the mine. That was a very small sum, and was not sufficient. He wanted the shareholders to help the directors. When they issued the 25,000l. of debenture stock it was done with the greatest possible deliberation. They thought the better and fairer way would be to divide the stock *pro rata* amongst the shareholders in proportion to their holding. They had altogether 670 shareholders in the company, but only 230 responded to the appeal, and 440 held their hands and let the company sink or swim as the case might be. Personally he felt much indebted to those 230 gentlemen who responded to the appeal. The time has now come when more money must be provided, as the shaft would cost about 5000l., and there must also be a sufficient amount of reserve, for there was the European and native staff to pay, and there ought to be 2000l. or 3000l. in hand. The amount of debenture stock really subscribed was 7119l., of which they had already spent 3600l., and they had called up another 1700l. Therefore it was absolutely necessary that the company should have a small amount of additional capital—not very much, because Mr. Harvey had told them that within a few weeks the mine would be self-supporting, and he believed it would be so. That would be a very important stage; that was the first step to paying dividends. Therefore, he hoped that when, after this meeting, the shareholders got a copy of Mr. Harvey's report and a financial statement, every one of them would respond, and each would take a portion of the debenture stock, which carried 15 per cent. interest, secured by a first mortgage on the property. Up to the present time the debentures had been taken by the shareholders, and he hoped the remainder would be so taken; if they were not they would be offered to the general public, and he thought 15 per cent. would be sufficient to bring in the public, who would see that it was a good honest stock. He would give a justification why the directors should be entrusted with additional money. When the present board took office they promised to observe every economy. When they took office the expenses in London were 1400l. a year; they were now reduced to 700l. The European expenses at the mine were 4000l. a year, including the late manager; they had been reduced to 2200l., which was a saving of 1800l.; so that since the present board had been in office they had effected a saving of 2500l. per annum. The general expenses at present at the mine, excluding the sinking of the shaft, were 774l. per month. They had heard from Mr. Harvey that they might from about the beginning of July expect to receive 300 ozs. of gold per month, which would be of the value of 1125l., which would be sufficient to pay the expenses of the mine and to yield a small profit. The amount they were going to call up upon the debenture capital was very small. He held 10,000 or 11,000 shares himself. The balance which they ought to receive almost immediately from the sale of the gold would be not only sufficient to pay the expenses, and to cover the debenture interest, but also to pay a small dividend upon the shares; and as soon as the shaft was sunk his calculation was they would be able to earn about 12,000l. per annum net, which would enable them to pay a good dividend upon the

shares, and as they then went deeper they would find the gold richer. It would be satisfactory to the shareholders to know that the company's title to the mine was perfect, and, in conclusion, the Chairman said it would be a great pleasure to him if in six months' time he could meet them, and congratulate them upon a dividend.

Colonel CHAMPION, in the course of some remarks, said that from careful independent investigation he was able to express his entire concurrence with the views of Mr. Harvey, and the statements made by that gentleman.

Some discussion ensued on minor matters of detail, in which Mr. Antrobus, Mr. Davidson, Mr. Danby took part, and the CHAIRMAN and Mr. HARVEY having replied to some questions and observations, the meeting closed with a vote of thanks to the Chairman and directors.

BURNISLAND OIL COMPANY.

The third annual meeting of shareholders was held at the offices of the company, Hanover-street, Edinburgh, on Monday, Mr. WADDELL (Chairman of the company), presiding.

The CHAIRMAN, in moving the adoption of the report, said: When they last met the shareholders authorised that an additional issue of 2000 shares should be made for the purpose of improving and extending the works, and these shares had been all taken up by their own shareholders. Since then the directors had been engaged in carrying out the proposed extensions and improvements, upon which they had spent capital during the year to the extent of 21,354l. 11s. 3d. In the last five months of the year covered by the report about 500 tons of shale per day had been worked out and distilled. During the year 125,000 tons of shale had been raised, and 116,000 tons had been used, from which they had manufactured 3,578,000 gallons of oil, equal to a yield of 31 gallons per ton of shale. The profits derived from this extent of working for the year amounted to 29,613l. 4s. 11d., to which had to be added—1. The balance carried forward from last year, 2146l. 13s. 7d.—2. Amount standing at credit of reserve fund, 1000l.—3. Amount received as premium on new shares, 11,000l.—14,146l. 13s. 7d., making a total for the year of 43,759l. 18s. 6d. In connection with these figures it might be mentioned that the directors had resolved to discontinue the reserve fund as a separate fund, and rather to increase the amount annually written off for depreciation. They also recommended that the 11,000l. of premium received upon the 2000 new shares be written off. It might be of interest to know that if it was agreed to write off these sums the amount of capital written off for depreciation during the two years and five months the works had been in operation would be equal to 20 per cent. of the whole capital. They recommended that the balance of 43,759l. 18s. 6d. at the credit of revenue should be disposed of as follows:—1. Dividend at the rate of 20 per cent. per annum, 20,490l.—2. Writing off cost of transfer of property, &c., 400l.—3. Depreciation on works, plant, and minerals, 19,500l.; and carrying forward a balance to current year's account of 3369l. 18s. 6d. As stated in the report, the whole of the works and mines had been thoroughly maintained at the cost of revenue. The mines were at present in excellent condition, and could, if necessary, be worked to the extent of 600 or 700 tons per day. The estate upon which the works are erected, and from which most of the mineral is derived, is the absolute property of the company. The board had leased two mineral fields adjacent to their own, both of which contain valuable shale, and are within 300 yards of the works, while the shale in these two fields was drawn from the same mines as their own. Regarding revenue, he was sorry to say that the oil market throughout the past year had been in a very depressed state, and although the burning oil had fully maintained its price, the other products had considerably fallen in value. The reduction of prices during the year, as compared with the previous year, was equal to not less than from 5 to 10 per cent. on the whole capital, so that had prices been maintained at their previous figures they should have been able to pay a dividend of at least 25 to 30 per cent. He was, however, glad to state that by careful and economical management, and the adoption of improved appliances, the cost of production of all their manufactures had been considerably reduced. Coming now to speak of capital expenditure, he stated that during the past year two additional benches of retorts had been erected, and also additional hydraulic presses, tanks, stills, &c. The mines had also been extended, so that they were now working 500 tons of shale per day, but to enable them to continue to do this without any hitch or stoppage it would be necessary to erect another bench of retorts, so as to ensure that all seven should be kept constantly going, seeing that cleaning and repairs were sometimes required. This part of the work would require about 4000l., and would ensure that nearly 5,000,000 gallons of crude oil per annum would be turned out. It might also be necessary to build a few more houses for workmen. With these exceptions, however, it was not expected that much capital expenditure on the works would be required during the current year.

Mr. BROWN, one of the directors, seconded the motion. They possessed, he said, a very valuable shale field, and it was, no doubt, right that all their shareholders should know that the property belonged to the company in fee simple. They had sunk three mines, and these were all at work. The whole existence of the company depended on the extent and value of the field, and they had already proved this, and the shareholders might keep their minds at rest, notwithstanding the rumours which had been set about regarding the shale being exhausted, and trap dykes, &c., having interrupted their working. These rumours had made people a little suspicious about the company, and they had sold their shares, but so far as the directors' experience had gone, the field was a thoroughly good one.

Baillie RICHMOND (Glasgow), asked what induced the directors to abandon the scheme for a reserve fund? because the Chairman had said nothing about it, and there was nothing regarding it in the report.

The CHAIRMAN said that a reserve fund must either be kept lying in bank, or be laid out on heritable property, the directors being responsible for it. As they had not, since the company was started, lost 200l. in bad debts, in fact, he did not think it was more than 100l., and as anything at their works that might be destroyed by fire was insured, the directors did not think they required a reserve fund, and they thought it would be more profitable to get the benefit of the money in extending the works and making improvements. According to law they could not use a reserve fund for that purpose, and the directors, therefore, resolved to write off something additional off the capital each year, and this they did in the best interests of the company.

Baillie RICHMOND expressed himself satisfied, and said he had heard a good deal of rumours in Glasgow in reference to the value of their property being much less than they stated, and that the supply of shale was very much smaller. To satisfy himself, however, he visited the works, and saw the whole of them in operation; and he was glad to think that the directors had resolved to have additional retorts, as that was what struck him as necessary when he was at Burntisland.

COAL MINING IN CANADA.—The report of the Canadian Department of the Interior for the last departmental year, just received from Ottawa, states that 370 applications for coal mining concessions in the North-West were received during the year. The Saskatchewan Coal Company, which is at work near Medicine Hat, and the North-West Coal and Navigation Company on the Belly River, are the only companies, however, that have engaged extensively in the business. During the four months ending Dec. 15 the former company had mined and sold 6000 tons of coal, which were delivered in Winnipeg at \$7 50c. per ton. The output of the latter company during the season was about 9000 tons, 3000 tons of which were purchased by the Canadian Pacific Railway Company, and the remainder distributed between the steamers belonging to the mining company, the Government offices at Calgary and Fort Macleod, and the settlers along the railway. The price of firewood in Winnipeg has meanwhile been reduced 50 per cent.

TRADEWAYS.—The closing prices of this evening, as quoted by Mr. Wm. Annett, of Tokenhouse-yard, are given in tabular form in the Stock and Share List page of the Journal.

THE EXPLOSIVES COMPANY.

An extraordinary general meeting of shareholders was held at the City Terminus Hotel, on Thursday,

Mr. C. HIGGINS was voted to the chair on the motion of Mr. H. WATT.

The CHAIRMAN, in opening the proceedings, said that he had received, as all other shareholders had, a notice stating or suggesting that the company should be reconstructed, and accompanying that notice was a paper containing certain resolutions which he presumed it was the intention to have submitted to this meeting. The first resolution would be that it had proved to the satisfaction of the company that it could not by reason of its liabilities, continue its business, and that it was advisable to wind up; secondly, that the company accordingly be wound-up voluntarily. It was further proposed to appoint a liquidator with power to continue to carry on the business of the company, in so far as he may consider requisite or necessary, for utilising and realising to the best advantage the assets of the company or any part thereof. It was further proposed, and this was the gist of the whole business:—"That in the opinion of this meeting it is desirable that the reconstruction of the company should be carried out, and that for that purpose the liquidator be, and he is hereby authorised to transfer or sell all or any of the assets of the company to any other company, formed or to be formed, and to receive in compensation, or part compensation, for such transfer or sale, shares either fully or partly paid up, or other interests in any such other company, for distribution amongst the members of the company being wound up, or to receive in compensation, or part compensation, for such transfer or sale, the right to participate in the profits of, or receive any other benefit from any such purchasing company, and generally to carry out such transfer or sale on such terms as the liquidator, in the exercise of his discretion, may deem expedient." Now, having received certain circulars from Mr. Nutt, in which he stated that he was the largest shareholder, holding 720 shares, they, the general body of the shareholders, were invited to send proxies to him, and he had no doubt received a number of proxies from shareholders who lived in the country, and who were unable to attend this meeting. He (the Chairman) was placed at a disadvantage, having on the spur of the moment been elected to the chair; and he must ask the indulgence of shareholders if he were not so familiar with the ramifications of the company as a Chairman ought to be. He wished shareholders to have a discussion on the resolutions, and to ask any questions that might occur to them.

Mr. HUGH WATT said that the last time he had attended a meeting of shareholders Baron Albert Grant presided, and propounded a certain scheme, but he (Mr. Watt) had ventured to bring forward a counter proposition, which was carried. It had been practically agreed that the shares as they then existed were really worth nil, and it was suggested that the shareholders should accept a 5l. bonus ordinary share and a 5l. debenture share. He (Mr. Watt) had asked the solicitor to the company whether these bonus shares would be legal, and whether the directors could issue bonus shares with the debentures. The solicitors were of opinion that some satisfactory arrangement might be made. But this point was not of much consequence at the present moment, for what they had seriously to consider was how the company was to be carried on in the future, and he ventured to say that if one-half of the requisite capital were subscribed amongst the shareholders, that he could find the other half. When they appealed to shareholders for 30,000l. they only got in response some 2000l. The committee had suggested the desirability of liquidation and reconstruction, and a certain scheme had been agreed upon. The position of the Explosives Company might yet be made very sound and strong, that was if the shareholders really had faith in the undertaking. (A SHAREHOLDER: That is the great question.) The assessment proposed on the shareholders was not large, and it was most desirable to pay off the mortgages contracted by the late, and some of the members of the present board. For the last 12 months the company had been struggling on and spending mortgage money, which might just as well have been thrown out of the window for any practical results which had been attained. The company had, in fact, retrograded, and the result of the last year's working was a loss of about 12,000l. He (the speaker) did not wish to animadvert on the committee that had been appointed, but they could not disguise from themselves the fact that the property had greatly deteriorated, and that if a realisation were forced there would be only sufficient proceeds to satisfy the debenture-holders. He was not exactly in a position to say what the actual value of the properties of the company might be, but one thing was quite certain, that if a forced sale were to take place the ordinary shareholders would not get one farthing; and it resolved itself, as he had said before, into the question, "Is the property worth saving or not?" So far as his own information went, he thought the property was worth saving, for they had practically a monopoly, and very valuable Government concessions. With regard to the system of reconstruction, he thought it ought to be conducted on a system of assessments of 5s. per share on the holder of each 5l. share. He did not think that was onerous, but of course it would remain to be seen whether an official liquidator would consent to such an arrangement. He ventured to say that the shares, which were practically worth nothing now, would become of some value in the event of such a scheme being carried out. It was for the shareholders to decide, and all he had endeavoured to do was to foreshadow what the scheme in contemplation was. If the shareholders accepted the new issue with 1l. liability, that would give the company 30,000l. The present debts were something between 16,000l. and 17,000l. He did not wish in the future to have any official connection with the Explosives Company, but he would at any time be glad to render any assistance which might be of use to the shareholders. The proposed scheme was favourable to the debenture-holders, and the property might be all freed. It should be borne in mind that this company was likely to be called upon by various governments for estimates, but governments did not give out contracts unless the firms they were dealing with were in a strong and unassailable position. Of course this was necessary in the matter of having contracts duly carried out. In conclusion, he would recommend the appointment of an independent liquidator, who would act in the interest of the general body of shareholders.

Mr. DAVIDSON observed that Mr. Watt said distinctly on a former occasion, that he could raise 30,000l., and he (the speaker) wished to ask why that promise had not been kept. (Hear, hear.)

Mr. WATT said the shareholders only subscribed 2000l., and Mr. Davidson must admit that it was a very onerous duty to supply the remaining 28,000l. (Laughter.) It must be borne in mind that financiers required to be paid for their services, and the shareholders would scarcely have liked to pay 10,000l. for an advance of 30,000l.

Mr. DAVIDSON said no allusion to such terms was made when shareholders were asked to part with their money. Mr. Watt had deliberately promised to raise the 30,000l., and had utterly failed in doing so, and what reason could he give? (Hear, hear.)

Mr. WATT here referred to his circular, which has for some days past been in the hands of the shareholders.

Mr. THORN said that the present proceedings were so totally different to what he expected them to be, that he did not know what course to take in the first instance. Mr. Watt now repudiated the Chairmanship of the company, but in a circular issued, wherein he signed himself Chairman, Mr. Watt had made lavish use of the personal pronoun "I," and it was "I do this," "I do that," "I do everything." The directors had advanced large sums of money to keep this company afloat, and, had they not done so, it would have long since been in liquidation. They had gone to financiers who, in the first instance, made propositions which would have involved the company in very large commissions; but when the affairs of the company were thoroughly gone into even these offers of assistance were promptly withdrawn. What gave rise to the wonderful statements of Mr. Watt, who came forward to blame the directors; but they were the only shareholders in the company who had subscribed in any substantial manner, thereby proving that they had the interest of the company at heart. He need not tell the meeting that there had been no response to Mr. Watt's appeal, except to the ex-

tent of about 1500*l.*, and there were various claims pressing on the company, and Mr. Watt was entirely wrong in saying that money had been literally thrown out of window.

The CHAIRMAN: Nobody imputes any bad faith to the directors. It may have been that the money was well or badly spent. What I would ask Mr. Thorn is to give the meeting some information as to the present value of the property and what are the prospects of the company for the future? (Hear, hear.)

Mr. THORN, resuming, said the money had been spent to pay pressing debts. Mr. Watt might urge his case as he liked, but whereas Baron Grant could at once get 7000*l.* on debentures, Mr. Watt was unable to raise more than 2000*l.* or 3000*l.*, and for this precious service Mr. Watt had demanded that 4000 bonus shares should be placed at his disposal, which fact he could prove. (Cries of "Oh, oh," hisses, and whistling.) This Mr. Watt insisted on in his office. (Mr. WATT: "Not me.") If Mr. Watt required proof he (Mr. Thorn) would send for the private memorandum book. Last week Mr. Watt had sold many shares, and was not now probably qualified to be a director; and had that gentleman any faith in what he had previously said to the shareholders, was it likely that he would have thus parted with his stake in the company. The steps that had been taken had been acquiesced in by Mr. Watt, Mr. Gray, himself, and the solicitor to the company. (Mr. WATT: "Not one of the statements are true.") Mr. Gray was a petitioner against the company, and perhaps Mr. Watt would deny that. He need only say that Messrs. Cooper Brothers and Co. had valued the mere brickwork, buildings, plant, &c., of the property at 27,000*l.* (Hear, hear.)

Mr. DAVIS said that did not include the licenses and the magazines, but was simply the value of bricks and mortar, and Messrs. Cooper Brothers said that by additions the property might be fairly set down at 50,000*l.*

A very long and tedious discussion ensued on the various values to be placed on the Pembrey and the Stowmarket Works, and their various capacities for turning out large quantities of explosives.

Mr. GRAY held to the opinion that by an expenditure of 1000*l.* or 1500*l.* the Pembrey Works could turn out 20 tons of dynamite per week.

Mr. THORN quite dissented from this view, but said that by an expenditure of between 400*l.* and 500*l.* the Pembrey Works could well turn out 5 tons per week.

Mr. BENNETT, solicitor, Mr. BAKER, solicitor (Lawrance, Baker, and Waldron), and other shareholders having spoken,

Mr. WATT said Mr. Thorn knew perfectly well that financiers who took in hand such companies as the Explosives Company, required to be paid for their trouble and risk. Mr. Henderson might have been appointed to receive at a small cost to the shareholders, but Mr. Thorn had forced himself into the position. (Mr. THORN: "I never heard of such a thing.") But he did not object to Mr. Thorn provided he acted as a friend to the shareholders. (Hear, hear.) He would not act on any board with Mr. Thorn, though that gentleman might offer to place 40,000 bonus shares at his disposal.

Mr. THORN: You have never been, nor are you likely to be asked. (Laughter.)

From this point the meeting resolved itself into what may be described as a general discussion.

Mr. HARRILD said he was convinced that it was perfectly useless to proceed with a capital of less than 30,000*l.* There were all sorts of expenses continually cropping up, and taking the debenture claims into account, the company must collapse unless this sum as a minimum were forthcoming.

Mr. CASPAR and other shareholders warmly advocated an entire change in management or liquidation, and a reconstruction of the company on a thoroughly sound basis.

It was ultimately decided *nem. dis.* to adopt the whole of the resolutions, and that Mr. A. J. Nutt and Mr. F. Thorn be appointed liquidators.

The debenture-holders and others gave an assurance that they would not proceed with their petitions before the Courts pending some satisfactory arrangement.

A cordial vote to the Chairman was carried by acclamation, and the proceedings closed.

MELLANEAR COPPER MINE.

The ordinary general meeting of shareholders was held at the offices of the company, Queen-street-place, on Thursday, Mr. ROBERT HENTY in the chair.

Mr. W. G. WILLIAMS (the secretary) read the notice convening the meeting, and the report of the directors was taken as read.

The CHAIRMAN said there was not much to be said in a general way which was at all cheerful, but still there were some points upon which they might feel more satisfaction than before. With regard to copper, which had been their main stay in former times, there was not much to be said. The returns amounted to 6944 tons, which was 150 tons more than in the corresponding year of 1883, meanwhile the price had been so materially reduced that they had had but a very scanty profit. If the price had remained at the figure of the previous year small as that was there would have been a very large difference in the amount of profit; as it was the amount of profit had been so small that the directors were only able to pay a dividend of 6*d.* per share. Some of the shareholders might think that it was hardly worth while for the directors to pay so small a dividend, but they were anxious not to go out of the list of dividend-paying mines, and it was decided to pay the dividend. The reserves of copper had been somewhat reduced, but this arose chiefly from the reduction in the price at which the reserves were valued. In fact, many points had been left out of the valuation altogether which, if copper improved, would become of value. One great point with regard to the mine was the prospect of tin, which was showing itself now at two or three different places. At the 130, which was the deepest level in the mine, tin had become so apparent that it was valued at 10*s.* a fathom, and the value of tin ore had now come into the valuation. Tin in sight was estimated at something like 900*l.* This was a new feature in the mine, and one which in a measure was, of course, consoling. Mr. Gilbert, the manager, said that the mine had reached that point in which, in other mines, Dolcoath the deposits had changed from copper to tin, and if that should take place here they, of course, would have the benefit of it. So far as the present half-year had gone there was no loss, but, on the other hand, there was no material profit, and there seemed to be no prospect, at all events, no immediate prospect, of the price of copper improving. The production was enormous, and was apparently beyond the requirements, so that unless a great many other mines should stop there seemed to be no probability of a diminution in produce, or an improvement in the price. At all events, they could only work on with patience in the hope that a better state of things would come about.

A SHAREHOLDER asked if there was any diminution in the consumption of copper?—Mr. JOHN TAYLOR said there was not; on the contrary, there was an increase.

Mr. STOREY asked whether they had stamps for stamping the tin?—Mr. TAYLOR replied they had not. This was a question which was now under the consideration of the directors, and the time appeared to be approaching when it would be necessary to put up some such machinery.

Mr. STOREY asked how they had dealt with the tin that they had sold so far?—Mr. TAYLOR said they had dressed the tin up to the highest produce they were able at the mine, and the stuff had then been carted away and smelted.

Mr. WILDE pointed out that Mr. Gilbert had predicted two years ago that when they reached the 120 fm. level they would, in all probability, find tin. The fact that at this point tin had been found, and that in the lower levels that there was an improvement in the tin deposits was certainly very satisfactory.

The CHAIRMAN, in reply to a question, said that they had two shafts.

Mr. TAYLOR pointed out that the deepest and richest metal mine in the kingdom, the Dolcoath, which had produced something like 2,000,000*l.* worth of tin, had, before becoming rich for tin, produced something like 3,500,000*l.* worth of copper. The Dolcoath Mine

was now upwards of 400 fms. deep, and in the bottom it seemed to be richer than ever. There was evidence at Mellanear that the copper deposits were changing to tin deposits; whether the change was going to be of such value as it had been at Dolcoath it would of course be impossible to say, but, as Mr. Gilbert pointed out, while the 100 fm. level east was worth 5*l.* for tin, the lode had gradually improved, and at the 130 the lode was 5 ft. wide, and worth 10*s.* a fathom for tin. This change was of great value to them, as the price of copper was of course very much lower than that of tin. In fact, on the previous day copper had reached almost the lowest point ever known—43*l.* 10*s.* a ton, whereas tin was selling at 88*l.* a ton; it would therefore be noticed that a ton of tin was worth about 2 tons of copper. It was a curious fact that about a half a century ago, that was in the year 1833, the position was exactly reversed, a ton of copper at the time was worth about 2 tons of tin.

Mr. TAYLOR then read the following letter from Mr. Edgar Taylor, who has recently been appointed purser of the mine:—

May 27.—I was underground yesterday in order to give you the latest news for the general meeting to-morrow. The shaftmen have just completed the necessary timbering and casing in Gundry's shaft, and to-day the skip will be drawing from the 130 fathom level. This will be a great advantage in future sinking, as hitherto we have had to draw by tackle from this level 10 fms., and then put the stuff back through cross-cut to the 120 perpendicular shaft. The men in the 130 ends west and east will also have the benefit of more speedy discharge of broken stuff, and the drainage and ventilation will be thereby improved. The sinking of Gundry's shaft will be resumed to-morrow, the shaftmen having finished this other piece of work. The 130 west has the same value as reported last—10*s.* per fathom for tin—and is a strong, well-looking lode, tin bearing throughout for its great width. The 130 fathom level east is also looking well, having improved for copper since my last inspection, and showing good-looking stones of tin in the end. The lode in this end is also very wide—nearly 10 feet. A most noticeable fact connected with the development of tin in our deeper levels is the hardening and widening of the lode as we get deeper into the tin-bearing ground, and, as you will notice from setting lists, we have now to give as much as 13*l.* per fathom for drive of the 130 west, and 10*l.* 10*s.* for same level east, prices far in excess of what had to be given for driving levels above, which were also in comparatively soft ground. It is very evident that before long the employment of machine drills will be both necessary and economical to cope with this increased hardness in the lode, as it would enable us to open up our deeper levels with much increased speed. I hope that this matter will have consideration at once, should we prove the continuance in depth of the tin-bearing lode by the sinking we have now in hand. The 120 end west, which is (see plan) 47 fms. in advance of the 130, has within the last few days yielded good stones of ore. I was much pleased with the improvement which has taken place in the bottom levels within the last month, and with the way in which the timbering of the bottom part of the shaft has been completed. The machinery and pitwork are in a most satisfactory condition both underground and at surface, and I am sure you would be pleased at the energy displayed by Capt. Gilbert and his under agents, Capt. Harris and Toms.

The CHAIRMAN, in reply to a question, said that they had expended capital to the extent of 2000*l.*, and that would more than suffice for procuring the necessary tin stamping machinery.

The CHAIRMAN, after some further conversation, moved the adoption of the report and accounts.

Mr. STOREY seconded the motion, which was carried unanimously.

The CHAIRMAN moved the re-election of the retiring directors—Messrs. Samuel J. Wilde and Mr. John Taylor, and Mr. KINGSFORD seconded the motion, which was carried.

Mr. Hurlbutt, the auditor, was also re-appointed, and the meeting closed with a vote of thanks to the Chairman and directors.

THE PRINCE OF WALES MINE.

A general meeting of shareholders was held at the offices of the company, Gracechurch Buildings, Gracechurch-street, yesterday, Mr. J. Y. WATSON in the chair.

Mr. C. B. PARRY (the secretary) read the notice calling the meeting. The accounts showed a balance of liabilities over assets of 1027*l.* 13*s.* 6*d.*

The report of the agent was as follows:—

May 26.—Since the last general meeting our operations (tribute excepted) have been confined to the deadwork of sinking, and other work connected with it, of Watson's engine-shaft, which is now sunk 10 ft., for tip-plat and fork, below the 114 fathom level. In this sinking it will be remembered that when about 7 fathoms below the 102 fathom level we discovered a flookan in the footwall side dipping into the shaft from the north, which we subsequently found to be the flookan part of a large and very promising tin lode, and, although having a greater underlie than the shaft, it remained in it about 5 fathoms, and left it the south side. This is about 5 ft. wide having the nature and character of productiveness and producing fairly good stamping stuff and occasional rich stones of tin. This lode, according to its underlie, as seen in the shaft, will form a junction with the main lode about 30 fathoms deeper, and there is every reason to believe that a great improvement will take place in both lodes long before that point is reached. Another point of interest is in driving east on this lode about 10 fms., No. 1 cross-course will be intersected, the influence of which, it is generally thought, will improve the lode. We have driven east 6 ft., and the cross-cut south about the same. The distance from the shaft to the main lode is about 15 fms., which we hope to accomplish in three months. We shall, as soon as practicable, remove the penthouse to the 102, case and divide the shaft to the 114 in order to wind the stuff, when the cross-cut, cutting plat, and other work will be hastened on with all possible speed. We have eight tribute pitches in working by 18 men, which at present are looking very encouraging to increase returns. In conclusion, I can only say that our prospects for the future were never better than at present, having the additional chances of the new lode, which can be wrought in the same time and at almost the same cost.—STEPHEN ROBERTS.

The CHAIRMAN said: At our last meeting, in February, our accounts showed a balance of liabilities over assets of 131*l.* 5*s.* 11*d.*, and a call has been made of 1*s.* 6*d.* per share, which brought in, less discount, 843*l.* 10*s.* 8*d.* An objection was then made to a larger. We now come before you with a balance of liabilities over assets of 1027*l.* 13*s.* 6*d.*, and we recommend a call of 2*s.* per share, which would realise 1834*l.* 16*s.* The improved condition of the mine, and the fact before the next meeting a good discovery is expected in the 110, now driving towards the main lode, should decide us to put the finances in a good position. A new tin lode has also been discovered, which underlies towards the main lode, and will in depth form a junction with it. During the last four months we have sold 84 tons of tin for 358*l.* 0*s.* 10*d.*; copper ore for 133*l.* 10*s.* 6*d.*; mundle, 12*l.* 14*s.* 6*d.*; making 498*l.* 5*s.* 9*d.*, and showing an actual loss on the four months' working of 769*l.* 0*s.* 7*d.* The debit balance is made up by the deficiency in the last call made. The agent reports that the prospects of the mine were never better than at present, and he is present to answer any questions that may be asked by shareholders. It should be stated also that in his mode of working he has been carrying out the resolution of the shareholders at the last meeting, and in doing so has discovered the new lode that adds considerable value to the property. The main lode of the mine which gave us upwards of 40,000*l.* of copper and good dividends from the shallower levels, has been for a few years going through the transition state from copper to tin. At the 102 it showed strong indications of tin, in one place worth 40*s.* per fathom. It was then inspected by independent agents, who expressed the same opinion in regard to a good tin mine in depth, and it was resolved, as I said before, to confine the operations to sinking the shaft, and in about three months we hope to cut the main lode 115 fms. deep, or 13 fms. deeper than it has ever been. In regard to the new lode, it is 5 ft. wide, tinny throughout, with occasionally very rich stones of tin of nearly $\frac{1}{2}$ cwt. each, and we should strongly

advise driving upon it at once, as it will open out good tin ground. In regard to the sales of tin and copper, these ores have all been raised by tributaries, who took the ground on their own account at so much in 1*l.*, and it has been profitable both to them and to the shareholders. The Chairman moved the adoption of the agent's report and the accounts.—Mr. WAGSTAFF seconded the motion.

A short discussion ensued, in the course of which Capt. STEPHEN ROBERTS corroborated the statements he had made in his report, and spoke very hopefully of the future of the property.

The resolution was then put and carried. A call of 2*s.* per share was then made, the shareholders expressing the opinion that it was advisable to put the company in a strong financial position.

The proceedings then terminated.

WHEAL AGAR MINE.

A quarterly general meeting of shareholders was held at the offices of Mr. E. Ashmead, Drapers' Gardens, yesterday, Mr. JOHN DARLINGTON in the chair.

Mr. CORNELIUS BAWDEN (the purser), read the notice convening the meeting, and the minutes of the preceding meeting, which were confirmed. The accounts, showing a balance in favour of the mine of 2469*l.* 15*s.* 5*d.*, were taken as read.

The CHAIRMAN said: Briefly put, the accounts show that the amount of tin raised in the 12 weeks was 145 tons 5 cwt. 2 qrs. 2 lbs. The total amount received is 6578*l.* 17*s.* 10*d.*, and there are sundries which will bring up the receipts to 7444*l.* 5*s.* 1*d.* On the other side we have payments amounting to 5440*l.* 1*s.* 3*d.*, and leaving a balance of profit on the 12 weeks' working of 1704*l.* 3*s.* 10*d.* The balance in favour of the adventurers on March 6th was 765*l.* 11*s.* 7*d.*, to which add the balance of profit for the 12 weeks—1704*l.* 3*s.* 10*d.*, making 2469*l.* 15*s.* 5*d.*, from which a dividend was paid on March 6th of 2*s.* 6*d.* a share, making, with the balance of 1719*l.* 5*s.* 6*d.*, a total of 2469*l.* 5*s.* 5*d.* The ledger balances show arrears of call 44*l.* 7*s.* 6*d.*; subsist account, 12*l.* 6*s.* 8*d.*; bills receivable for arsenic, 808*l.* 17*s.* 6*d.*; and Messrs. Williams, Williams, and Grylls (bankers), 2706*l.* 7*s.* 5*d.* On the other side there are the merchants' balances of 677*l.* 17*s.* 9*d.*; lord's dues, 560*l.* 12*s.* 11*d.*; club account, 566*l.* 0*s.* 9*d.*; doctor, 33*l.* 17*s.* 6*d.*; Stannary assessment, 13*l.* 14*s.* 9*d.*; and the adventurers' balance of 1719*l.* 5*s.* 6*d.*

Mr. JOHN G. BONE proposed the reception and adoption of the statement of accounts.—Mr. R. HATTERSLEY seconded the motion.

Capt. W. T. White read the following report on the mine:—

May 29.—The contract set to our engine-shaftmen on our last pay and setting day to complete the shaft plot, fix penthouse, and other necessary work for sinking, will, we expect, be completed this week, and on Saturday next we intend setting the shaft to sink below the 235 fm. level. The 235 is now being driven by boring-machine, a certain contract to communicate to the pump winze sinking below the 225; price for driving, 13*l.* 10*s.* per fathom. This end is driven east of shaft 3 fms. Sump winze sinking in bottom of 225, east of engine-shaft, by nine men and three boys, at 15*l.* per fathom. The winze is 20 fms. east of engine-shaft, and is down 9½ fms. We have about 6 ft. more to sink to be equal with the 235, when we intend driving east of same to catch the rich run of tin ground gone down in bottom of the 225 as soon as possible. Since our inspection on Wednesday the rise in the back of the 225 in eastern cross-course is communicated to the 215. These men will now again be put to drive the 225 end east of eastern cross-course with all speed. An early improvement in lode in this end is fully expected, which is 100 fms. east of engine-shaft. A stoep in back 225 is worth for tin 20*l.* per fathom; stooping by nine men at 6*s.* per ton of stuff. The 226, driving west of north cross-cut, on north branch, by four men, at 6*s.* 6*d.* per ton; lode small, and producing low quality work for tin; this end is in disordered ground. The 215 is driven east of eastern cross-course 14 fms.; driving by six men, at 8*s.* per fathom. The lode in this end has very much improved of late, and is worth 12*l.* per fathom. This end is 114 fms. east of engine-shaft. No. 1 stoep, in bottom of the 215 east, by nine men, at 6*s.* 6*d.* per ton; lode worth 25*l.* per fathom. No. 2 stoep, in bottom of the 215 east, by nine men, at 6*s.* 6*d.* per ton; lode worth 20*l.* per fathom. No. 3 stoep, in the bottom of the 215 east, by six men, at 6*s.* per ton; lode worth 15*l.* per fathom. No. 4 stoep, in bottom of the 215 east, by nine men, at 6*s.* per ton; lode worth 15*l.* per fathom. The 205 is driven east of eastern cross-course 5 fms. The lode in this end is large, and has greatly improved of late, and worth for tin 25*l.* per fathom. This end is 105 fms. east of the engine-shaft. The 205 is being driven west of winze, by two men, at 13*l.* per fathom; lode worth 15*l.* per fathom. No. 1 stoep, in bottom of the 205 east, by nine men, at 5*s.* 6*d.* per ton; lode worth 25*l.* per fathom. No. 2 stoep, in bottom of the 205 east, by nine men, at 5*s.* per ton; lode worth 12*l.* per fathom. No. 3 stoep, in bottom of the 205, by nine men, at 5*s.* per ton; lode worth 12*l.* per fathom. We have within the last week communicated the rise in back of the 205 in eastern cross-course with the 195. This has improved the ventilation, and we have now put the men to take down the lode standing in the south side of the 195, which we think of driving this level east on in the future. A stoep in the bottom of the 195 east by nine men, at 5*s.* 3*d.* per ton; lode worth 15*l.* per fathom; a stoep in back of 195 fm. level east by six men, at 6*s.* per ton; lode worth 15*l.* per fathom.—South of Engine, Lode: The 215 fm. level is driven east of eastern cross-course 6 fms., and worth for tin 10*l.* per fathom, driven by four men, at 11*l.* per fathom. The 205 fm. level is driven east of cross-cut 6 fms., and worth for tin 15*l.* per fathom; driving by four men, at 12*l.* per fathom. A stoep in bottom of the 205 fm. level, east of cross-cut, by six men, at 6*s.* per ton; lode worth 13*l.* per fathom. Believing the development of this lode to be very important, we think of driving the 205 and 215 fm. levels west on same as soon as possible. This lode, according to its present bearing, will form an important junction with the main lode, east of the eastern cross-course, within a comparatively short distance driving from the present ends.—New Shaft: The contractor is making fair progress towards effecting communication between the 150 and 215 fm. levels, and from the distance of ground now remaining between these two points, this will be accomplished, we think, within the next two months, which will greatly facilitate the workings in our deeper levels, and we deem the prospects of the mine to be altogether satisfactory.—W. T. WHITE, R. DANIEL, W. PARKIN.

Mr. BONE asked what was the cauter lode in East Pool?—Capt. WHITE replied that according to the drive on this lode in East Pool it was the same as their south lode in Wheal Agar. In East Pool this was a very productive lode—in fact, it was from this lode that a great portion of their returns had been produced, and in all probability it would prove equally productive in their mine. It was now their intention at Wheal Agar to drive the 205 fm. level west on the same lode. At present only one stoep had been worked on this lode in Wheal Agar, from which the average produce was 2 qrs. of tin to 1 ton of stuff, which was a very good average. This lode would also form a junction with their main lode, probably within 30 fms. east of their eastern cross-course. That was a very important point, and one which the shareholders might look forward to with great interest.

The motion for adopting the accounts and the agents' report was then put and carried unanimously.

Mr. JAMES PETRIE moved—"That a dividend of 5*s.* per 6000th share be declared and paid forthwith." That, he said, would require 1500*l.* to be paid, and there would be 219*l.* 16*s.* 6*d.* to be carried forward to next account.

Mr. BONE seconded the motion, and it was carried. Captain WHITE, in reply to a shareholder, said that the average produce of tin at Wheal Agar for the past quarter was 79*l.*

The CHAIRMAN then moved—"That the increasing importance of the duties of the manager of both Wheal Agar and Wheal Bassett, each required the undivided attention of a manager; the committee, after careful consideration, have appointed Captain White manager of Wheal Agar, and they now ask the meeting to confirm his appointment, and at the same time they desire to thank Captain Trevelyan for his past services."—Mr. HATTERSLEY seconded the motion, which was adopted. (Hear, hear.)

Mr. LANE said that if Captain White did the same for Wheal Agar as he had done for Wheal Pever, he did not think the share

holders would regret the appointment. Did Captain White believe he could do so?

Captain WHITE replied that he thought he could.

Dr. FINCH asked if the machinery at Wheal Agar was satisfactory? He asked the question because he had seen statements made that the machinery was not in a satisfactory condition.

Captain WHITE, in reply, said he had gone through the machinery pretty carefully, and he did not see anything in connection with it to cause any suspicion or doubt as regards its future effectiveness in carrying on the draining operations at Wheal Agar. (Hear, hear.)

On the motion of Mr. LANE, seconded by Mr. C. FLEWEN, a vote of thanks was passed to the Chairman and committee of management, and the proceedings then closed.

COAL AND COAL PLANTS.

At the recent meeting of the Manchester Geological Society the following paper was read by Mr. MARK STIRUP, F.G.S.:—Notwithstanding that recently, at our meeting at Owen's College, we had the opportunity of hearing discourses on the carboniferous flora from Professor Dawkins and Dr. Williamson, I venture to take up the same almost inexhaustible subject, touching upon a few points which were not discussed on that occasion by the learned professors. Firstly, I would say a few words on the geographical distribution of our coal fields and the probable conditions, terrestrial and meteoric, under which they were formed. Although we must not hope to find coal under every latitude, yet explorations of various kinds have in recent years made us acquainted with the wide dispersal over the globe of deposits of coal belonging to that period of the earth's history known to geologists as the carboniferous period. We have, as you know quite well, brown coals and lignites belonging to later geologic ages, but they are poor and insignificant in comparison with the coal deposits of the older formation. When we compare the fossil plants of the carboniferous age from different English coal fields, and these again with those coming from the various European deposits, we find a wonderful similarity in the facies or character of the flora. Again, if we cross the Atlantic to those vast coal fields of the United States and Canada, we find, according to the statement of Mr. Lesquereux, that two-thirds of the coal flora of America are common to it with that of the Old World. Arctic voyagers bring home to us the same tale from the Polar regions, where, in the coal beds at Spitzbergen, similar fossil plants are found as in Europe. In the East Indies, China, South Africa, and Brazil we find their coal deposits to contain familiar species. In Equatorial regions, in the recently explored basin of the Zambesi, has been found a number of fossil plants well known in European coal fields. The uniform resemblance and analogy of the vegetation of this period over the whole world is a startling and remarkable fact that may well arrest the attention of the most unobservant. It teaches us that instead of the different climatic conditions which now obtain, there must then have reigned a uniformity in the diffusion of light and heat over the whole earth, an absence of seasonal changes; such conditions, in fact, of which we have no evidence in succeeding geological epochs. From the nature of the flora, the terrestrial conformation must have been widely different from that of the present day; great parts of the then existing continents must have been but slightly elevated above the level of the sea. Upon the low grounds of the coast line, or bordering lagoons, or inland lakes, stretched extensive forests, which were probably subject to periodical inundations or irruptions of the sea. The extent of some of these carboniferous forests almost baffle belief. Mr. Henry Rogers, speaking of the Appalachian coal field of the United States, the most extensive yet explored in any country, says:—"A comparison of the strata of contiguous basins convinced him that they were only detached parts of a once continuous deposit, whose superficial area he calculates, upon a moderate estimate, at 63,000 square miles." The same uniformity of temperature of which I have spoken, was not confined to land areas, but pervaded the sea also, as exemplified by the marine fossils of the carboniferous limestone, such well-known forms as *Productus semireticulatus*, *P. longispinus*, &c., being common to Spitzbergen and Russian deposits, as well as to Bolivia, in South America. The well-known coral polypary (*Lithostrotion*), prevalent in carboniferous deposits of Europe and the United States, has also been found at Point Barrow, in the Arctic regions. When corals could grow in the Polar Seas, we feel quite certain that the temperature of those waters must have approximated to that of our present tropical seas. While the marine organisms of the carboniferous seas preserved a certain consistency of type during those long ages of the accumulation of the coal measures, the terrestrial flora did not maintain the same integrity, so far as the permanent maintenance of any dominant genera or species. Though the same classes, orders, and families extend over the whole carboniferous epoch, yet special forms distinguish definite horizons; for example, the earlier stages of the carboniferous period are marked by the preponderance of *Lepidodendra*, *Sigillaria*, and *Calamites*, the later stages by their decline and the appearance of other forms, such as *Cordaites* and *Calamodendron*. At least such is the teaching of M. Grand'Eury (M. Gœinitz had previously put forth similar doctrines, and in his work, *Die Steinkohlen Deutschlands*, divides the carboniferous period into three successive floras, the oldest characterised by the *Lycopodiaceae*, the middle term by the preponderance of the *Sigillaria* and *Calamites*, and the upper by the reign of the *Sigillaria* and *Calamites*, an eminent French palaeobotanist, who has long and closely studied the fossil plants of his own immediate district—the coal basin of St. Etienne and the Loire—and has compared them with other European and American types. The result of his labours has been the publication of a work in which he asserts the possibility of determining the relative ages of the different beds of coal of any isolated basins by the examination of the paramount or prevailing species. The importance which he attaches to this numerical preponderance of any group of plants is shown by the use he makes of it in his classification. Mr. Grand'Eury has divided the carboniferous flora (with which he includes the permian), conformable to his recognised order of development, into five phases, and these again are divided into zones marked by the advent of certain species and their numerical preponderance in any zone. He classes, by their flora, the English coal fields in one great coal band, stretching outwards from our shores, and including those of Flanders, Belgium, and Westphalia. To the south of this line the isolated coal basins, such as those of Central and Southern France, belong to a phase of vegetation posterior to that exemplified by the English coal fields. In the classification put forth by M. Grand'Eury, the lower coal measures of Scotland are placed in the first or earliest phase, and the lower and middle coal measures of England in the middle zone of the second phase. The coal beds of St. Etienne rank later in time, and are remarkable by the paucity of *lepidodendra* and *sigillaria*, and the relative abundance of *cordaites*, tall growing trees (60 to 100 or 120 ft. in height), allied to the conifers, whose debris are said to be the principal components of some of the thickest beds of this coal field.

Leaving this portion of the subject I would ask your attention for a few moments to the consideration of another point, and that is the nature of the plants which go to form coal. We have seen from the examination of various coal beds that the vegetable remains of which they are composed belong to different kinds of plants. The question then arises, Has this difference anything to do with the various qualities of coal? It has been said that certain coals found suitable for the forge are rich in *sigillaria*, whilst coals suitable for gas-making contain an abundance of ferns. From such like circumstances many geologists have concluded that there exists a direct relationship between the plants which have formed the coal and the quality of the coal derived from them; others, however, maintain strongly that these differences are due solely to the conditions under which the transformation into coal took place. With reference to these debated points I am able to put before you the result of a series of experiments or chemical analyses which have been recently published in the *Echo des Mines*. Chemical analyses of coal have often been made, and long lists are given in Bischoff's *Chemical Geology*, but I am not aware of anywhere the analyses of particular fossil plants have been given.

[Translation of extract from *L'Echo des Mines*.]

"It is generally believed that there exists a notable difference in the chemical composition between different vegetable species; nevertheless two varieties of nearly opposite kinds of wood, the oak and the fir tree, have given under the hands of M. Gottlieb, of Copenhagen, the following elementary composition:—

	C	H	O	As	Ash.
Oak	50.16	6.02	43.36	0.09	0.37
Fir	50.31	6.20	43.08	0.04	0.37

The same similarity exists among the plants transformed into coal, as is shown in the following list, which contains the analyses of different fossil plants found in the great bed of Commentry. A and B are two analyses of this bed. The first is due to M. V. Regnault, and has been published in his well-known work on combustible minerals; the second has been obtained by M. Carnot. (The figure placed after each species indicates the number of samples employed.)

	C	H	O	As
Calamodendron (5)	82.95	4.78	11.89	0.48
Cordaites (4)	82.84	4.88	11.84	0.44
Lepidodendron (3)	83.28	4.88	11.45	0.39
Psaronius (4)	81.64	4.80	13.12	0.44
Ptychopteris (1)	80.62	4.85	14.53	
Megaphyton (1)	83.37	4.40	12.23	
A	82.92	5.30	11.78	
B	83.21	5.57	11.22	

The quantity of hydrogen in the great Commentry bed is rather more plentiful than that which exists in the different fossil plants which are sufficiently well preserved to permit their botanical determination by M. B. Regnault with the aid of the magnifying glass or microscope. It is because leaves and vegetable debris of all sorts enter into the composition of the coal, whilst the samples of the different species cited above are composed mainly of trunks, bark, and roots. We have found, so far, a certain resemblance among the different species; now comes the divergence. When the aforesaid plants are distilled the numbers in the following list are obtained, which includes at the end the analysis (B) of the coal of the great bed of Commentry:—

	Volatiles matters.	Fixed residue.
Calamodendron	35.3	64.7
Cordaites	42.2	57.8
Lepidodendron	34.7	65.3
Psaronius	39.5	60.5
Ptychopteris	39.4	60.6
Megaphyton	35.5	64.5
B	40.6	59.4

Thus, the experiments of M. Carnot show that the age of the coal and the different circumstances which have ruled at its formation are not the only ones having influence over its properties. Whilst the conditions have been absolutely identical, the different vegetable species have produced coals of sensibly different qualities."

I do not suppose for a moment that the experiments detailed above will settle the oft-debated question as to whether we are to seek in the nature of the plants themselves, or the conditions under which they were entombed, the explanation of their varying qualities. Probably both views are partially correct; for while, under certain circumstances, richness in volatile matters may be rightly ascribed to the nature of the plants forming the coal, yet we cannot lose sight of the fact that beds of coal that have been greatly disturbed by earth movements may have lost some of their volatile substances owing to, as suggested by Bischoff, the readier access of water which favoured the evolution of gases. Other causes might be suggested for these differences, but their consideration at the present time would lead us into a very controversial region. In conclusion, and by your permission, I will trespass for a few moments into debatable land, and that is the consideration of the cause of the unique character of the carboniferous flora. We know that at the present day distant parts of the world are distinguished by their peculiar vegetation and distinctive climate, a state of things which is in absolute contrast to that which obtained in the carboniferous epoch. Many speculations or hypotheses have from time to time been put forth to account for this singularity, but all have failed to satisfy the conditions of the problem awaiting solution. The structure of the plants which compose the vegetation shows the absence of seasonal changes, and the family likeness which prevailed from the Equator to the Poles demonstrates that the same external influences with equal distribution of light and heat existed everywhere. Various astronomical and terrestrial causes, which I shall not take up your time to enumerate, have been assigned to account for a climate so exceptional, at once humid and tropical, and co-extensive with the globe. A theory in explanation, which was proposed some 15 years ago by M. Blandet, has recently been revived, and has received the adhesion and support of several foreign savants. It is an adaptation of the nebular hypothesis of Laplace. It is suggested that during the early periods of our earth's history the solar system presented a different aspect to what it does now. Other worlds than ours were undergoing changes, probably vaster far than any that our earth bears record of. The sun itself was not then a bright and brilliant globe of well-condensed matter, but a luminous nebula, occupying a considerable place in space. From its larger size its rays illuminated a larger extent of the earth's surface, so that no circle of latitude was in the position of having to accomplish the whole of its diurnal rotation in the dark. What M. Blandet's theory demands is an increased diameter of the sun, with a less condensed state of its component matter, emitting less of light and of heat per unit of surface than at present. In this simple hypothesis seems to lie the secret of the climate of the carboniferous epoch.

Discussion upon the paper was deferred.

IMPROVEMENTS IN TOOLS FOR CUTTING TWIST-DRILLS.—Messrs. W. COLLIER and Co., of Manchester, have in hand a series of special tools for cutting twist-drills, in which a number of improvements have been introduced. One of these is a specially designed combined machine for cutting wheels up to 18 in. diameter, and to admit 18 in. in length between the centres. These machines will cut skew, spur, bevel, or worm wheels, and it has an attachment for cutting twist-drills with increasing twist as required, rosebits, &c. In construction this machine may be described as follows:—The body consists of a strong base, fitted with transverse slides, each having an adjustable motion for cutting any angle of tooth, and long traverse to admit different diameters; worm wheel, worm and dividing motion are attached as is usual with ordinary wheel cutting machines. For cutting twist-drills, rymers, &c., an additional slide and head stocks are provided, with motions for cutting the increased twist in Morse drills, and when the machine is not required for cutting twist-drills this attachment can be taken from it, and wheel cutting resumed, or vice versa. In connection with the plant Messrs. Collier have also a small machine adapted for cutting the clearances required in twist drills behind the cutting edge, and arranged to admit any size of drill from the smallest to the largest that are now in use. In this machine the twist-drill to be operated upon is placed between centres and revolved, and the clearance behind the cutting edge is cut away by means of a cutting tool, placed vertically, and having an eccentric motion, which gradually cuts the clearance from the cutting point to the back of the thread, and thus ensures a uniform clearance in all the drills passed through the machine. This machine can be applied either to regular or to increased twists. Another special tool is a twist-drill pointing machine, which consists of a light frame carrying a horizontal spindle, which is fitted with a quick running emery grinding wheel. The base of the frame is also fitted with a compound slide, with longitudinal and traverse adjustment, so as to admit any length, or diameter of drill required to be pointed. There is a top rest, with a powerful chuck, having a cam motion so as to allow for the interval of space, and make the requisite graduating face on the point of the twist-drill.

HUMBURG UNAPPRECIATED.—Mr. Robert Symons, the well-known mining engineer and surveyor, of Truro, was announced to deliver a lecture, entitled "Humburg," in the Grammar School-room, Lostwithiel, on Wednesday evening, but, owing to the very small audience, it was adjourned until an evening in the winter.

THE UTILISATION OF BLAST FURNACE SLAG.

Marked progress appears to have been made of late in the utilisation of the slag produced in the making of pig-iron, so that what was not so very long since looked upon as worthless and gladly given away, has become an article of profit, and converted into various kinds of ware, artistically moulded, as well as into building material. A few days ago we noticed at an exhibition some fine specimens of what appeared to be marble, but which turned out to be coloured and veined slag in the shape of vases, flower stands, inkstands, &c., all tastefully moulded in classical and other designs. When it is considered that there is a yearly output of some seven or eight million tons of slag it will be evident that there is a great field for turning it to many purposes in addition to those to which it is now directed. A large quantity is now being taken and moulded into bricks for building purposes. Brick-pressing machines are now in operation that will turn out from 10,000 to 12,000 a day, and they do not require to be put into kilns. When taken from the press the bricks are merely stacked in sheds, and remaining there five or six days they are stacked outside to harden. Nails can be driven into these bricks without splitting them, and in this respect they have a great advantage over the clay bricks, whilst with greater hardness they are much less in weight than the latter. Cement is also made from the slag, and an admixture of lime and some other ingredients, and is said to be not inferior to Portland for concrete and hydraulic works, whilst the price is not more than one-third of it if not less; but the least valuable purpose to which the slag can be turned is the making of slag wool, or silicate cotton, as it is sometimes termed, owing to its bearing a close resemblance to that fleecy material, or to snow flakes. The cotton is made whilst the slag is in a molten state, by means of a jet of steam which is thrown upon it. This separates the material, or scatters it, and each piece carries a fine thread of fibre, which is drawn into a tube. When gathered and manipulated in a simple manner, it is used for various purposes. Amongst others, by means of a patent process, it is employed for covering steam boilers and pipes, for which it has proved to be invaluable, owing to its being perfectly incombustible as well as non-conducting. These properties have caused it to be most extensively used for all kinds of boilers, more especially those connected with marine engines. For articles in which it is not necessary to have a completely pure glass, a capital substitute has been found in slag, and from it good roofing glass, and that for the making of coloured bottles, has been turned out, a patent for the latter having been taken out a few years ago by Mr. B. Britten. More recently, however, slag has been converted into what is termed "fine art manufacture," a kind of veined majolica material, most attractive and pleasing to the eye. It is turned out in all shapes and forms of a highly ornamental character, such as suitable for the drawing-room, the toilet table, the mantel-piece, and the office. The slag is taken in its cold state, and thoroughly well ground by powerful machinery, when it is mixed with a small percentage of glass. It is then made into a paste and put into moulds and pressed into the desired shapes, when it is fired. The different shades and colours, as well as the veins, contribute to make an article of finish and beauty at a very small cost, and the demand for which, there is every reason to believe, will be very great when the products are generally known. At the same time we believe that the new art can be considerably improved upon, and the articles turned out of still greater beauty and effectiveness. This could, we consider, be accomplished by a judicious selection of slags and in the blending of them, more as regards their colour, and so made to resemble various kinds of marble and alabaster. The colour of slags, as well as their physical character, vary a great deal owing to their composition and the condition of the furnace. In some instances the slag is a bright green or brown; in others it is blue, purple, or porcelain. Protoxide of iron produces a colour that is dark green, or nearly black, but in the ore, which contains a considerable proportion of manganese, there is a slag bearing resemblance to amethyst, but where the furnaces are worked what is termed hot, and the iron made is of a grey description, then the slag is white, or tending to grey. Where there is a good deal of alumina in the furnace the slag is tending to white, or of an opal appearance, whilst the clay ironstone, peculiar to the coal measures, give, we are told, an alternation of light yellowish and dark green or blue bands and stripes. Here there are combinations of colours of the most varied character, which we believe might be advantageously manipulated for producing articles that would be in the highest degree attractive by skillful combination. Hematite ores appear to be different from those of an ordinary kind found in connection with the coal measures, or in the oolites in the North of England and in Northamptonshire and Lincolnshire. The slags of some of these hematites give fine violet and amethyst tints, and in some slates they are turned out of a pearly white. In some of the refuse of the blast furnaces we have different shades of blue, green, yellow, and other colours, dependent, as we have before stated, upon the nature of the ores, although how the colouring is brought about or the direct agent has not been clearly demonstrated, as, for instance, we are told that the bright sky-blue tint frequently seen in Swedish flags is attributed to titanium, sulphide of sodium, and other matter. With these colours and tints found in slags, we believe it possible, either singly or by combination, to bring about the most pleasing effects in colours and shades for practical, as well as ornamental, purposes, and so give value to an article which has hitherto been considered all but worthless. It is only within the last few years that, excepting for the repairing of roads, slag has been successfully converted into a commercial and profitable commodity, and now there are a great many uses to which it is being put, and there are yet plenty others that time will develop and mature. The making of slag-bricks and concrete has been profitably carried on at several places of late, but the converting of the material into articles of ornament and beauty is the latest phase connected with the utilising of the waste products of our blast furnaces, and this branch promises to become an important one, seeing that it is capable of great improvement, which, no doubt, will be carried out with both energy, skill, and taste.

VIOLETA GOLD PLACER.—The sluices for washing the gold are now on the mines, the canals for conveying the water to the auriferous gravels are approaching completion, and in a few weeks the investing public will be able to see for themselves that the existence of gold in Spain is a realised fact. We learn that the Spanish Government, being deeply interested in the development of these gold fields, have directed all their officials to offer every facility to the directors and officials of this company.

At a mass meeting of miners at Hamilton, on Thursday—Mr. John Clyde presiding—it was resolved to restrict work to eight hours, and a darg of 2 tons 10 cwt. in close places and 8 tons in the stoops. It was also resolved to solicit an advance of 6d. a day.

GOLD AND SILVER.—Messrs. FIKLEY and ABELL write under date May 29:—Gold: The absence of all demand for gold still continues, and all amounts arriving here have been purchased by the Bank of England; 184,000l. has been sent in during the last week, and no withdrawals have taken place. The Ruapehu brought 65,000l. from New Zealand; the Pekin brought 25,000l. from Australia; the Moselle brought 8,600l. from the West Indies; the Orient brought 6,600l. from Australia; the Nepal brought 3,600l. from Madras; and the French steamer brought 36,000l. from Central America; total, 144,800l. Silver is slightly firmer, in sympathy with the better rates received from India. The arrival from the River Plate was fixed at 49,500l., and we quote to day 49,500l. The chief arrivals are 60,000l. from the River Plate; 46,500l. from New York; and 47,000l. from Australia; total, 111,000l. The Mirzapore takes 128,500l. to Bombay. Mexican dollars have been merely nominal until to-day, when the arrivals by the Moselle were disposed of at 49d., for export to China. They amounted to 128,000l., and there were no other arrivals of importance. Exchange: The India Council yesterday allotted:—Bills on Bombay, Rs. 3,05,749; average rate, 1s. 7d. Calcutta, Rs. 5,50,000; average rate, 1s. 8-3/4d. Transfers on Bombay, Rs. 1,20,000; average rate, 1s. 7-3/4d. Tenders for bills at 1s. 6-1/4d. receive 50 per cent., and above, in full; and for transfers at 1s. 7-1/2d., about 50 per cent. Amount for next week, Rs. 12,00,000. The special rates were:—On the 21st, bills, Rs. 1,00,000 at 1s. 6-1/2d.; Calcutta, Rs. 100,000 at 1s. 6-1/2d.; Bombay, Rs. 15,000 at 1s. 7d.; Madras, on the 23rd, transfers, Rs. 1,50,000 at 1s. 7-3/4d.; Calcutta, The Exchanges from the East are:—Bombay and Calcutta, 1s. 6-1/2d.; Hongkong, 1s. 6-1/2d.; Shanghai, 4s. 1-1/2d. Quotations for bullion: Gold: Bar gold, fine, 77s. 5d. per oz. standard; bar gold containing 20 dwts. silver, 77s. 10-1/2d. per oz. standard.—Silver: Bar silver, fine, 48s. 10-1/2d. per oz. standard; bar silver, containing 5 grs. gold, 48s. 10-1/2d. per oz. standard; cake silver, 53d. per oz.; Mexican Dollars, 48s. per 100; quick-silver, 5s. 12s. 6d.; discount 3 per cent.

Mining Correspondence.

BRITISH MINES.

BEDFORD UNITED.—H. Trease, May 25: I beg leave to hand you the following report on the present state and future prospects of the mine. During the past six months our operations have been limited to driving the 138 east, where the lode is worth for the distance driven, 9 fms., 51. per fathom. The present drift is being continued with the view of intersecting the about of ore gone down in the bottom of the 137, in advance of the present end about 10 fms., and should it continue in depth, it will pay very well to work at the present price for ore.—Bridge Lode: The engine-shaft is sunk to the 30, and the men are engaged in driving a short distance from the shaft for security previous to putting in ship-road and ladder-way to the bottom of the mine, which are hope to complete in about a fortnight; the driftage will then be resumed and the lode intersected. I am hopeful we shall find a good improvement in the lode, seeing a lode has been intersected in sinking the shaft underlying north, which will intersect with the main lode in depth. The lode in the 75 east has been opened up about 3 fms., yielding a little muddle and ore for the distance driven. This end is suspended for the present. The 75 west has been opened on about 25 fms., 3 ft. 10 in. in a lode from 2 to 3 ft. wide, composed of muddle and ore. A cross-cut is being driven north on the 75 west, to prove if there is any more lode in that direction. The lode in the 62 west looks very promising, being about 3 1/2 ft. wide, composed of capel and some rich black oxide of ore of excellent quality, and the lode in which the lode is embedded is very congenial for the production of copper ore. The present end is about 140 fms. from shaft, and 70 fms. west of the cross-course, the lode proving productive for ore at intervals. A cross-cut has been driven south 27 fms., 4 ft. 6 in., but no lode has been met with. In the 62 east the lode is from 4 to 5 ft. wide, strong and masterly in appearance, and worth 71. per fathom. The end has been driven in the past six months 17 fms., 3 ft. 12 in. which was worth 51. per fathom. The 42 east has been driven 8 fms., 5 ft. 6 in. in a lode 2 ft. wide, of a promising character, producing saving work for ore and muddle. The engine-shaft has been sunk 12 fms., 4 ft. 4 in. and the 75, 8 fms., 9 ft. 6 in., and west 25 fms., 3 ft. 10 in. The 62 west, 31 fms., 3 ft. 4 in., and east 17 fms., 3 ft. A winze in the bottom of the 62 west, 2 fms., 5 ft. 3 in., and a cross-cut south 27 fms., 4 ft. 3 in. The 42 east 8 fms., 5 ft. 6 in., and the 138 east on the north lode 9 fms., 1 ft. 11 in.; total, 135 fms., 1 ft. 4 in. A winze sinking below the 62 west is worth 21. per fathom. The 62 east 71. No. 1 stop in the back of the 62 east, 51. No. 2 stop, 41. No. 3, 41. No. 4, 41. and No. 5, 51. per fathom. The 138 east, north lode, 51. per fathom. We have nine pitches working on the Bridge Lode at the present time, from 10 to 12, 4 ft. 4 in. The number of men employed on the lode is 38; tribute, 30; and on the surface, 12; total, 70 men. In conclusion, I may say that the mine throughout for the past six months has not proved so remunerative as I anticipated—the price of copper ore having dropped 10d. per ton since the last meeting; to this may be added a falling off in some of the points of operation; but I am hopeful as we extend our operations east and west, and also in depth we shall make good discoveries of ore. The stratum of ground in the western part of the mine is still of a most congenial character for ore.

CARN CAMBORNE.—W. C. Vivian, May 28: In the 105 west there is no indication yet of the cross-course, we may have 4 or 5 fms. more to drive to reach it. The granite through which we are now driving is harder than it has been.

COED-Y-PEDW AND PANT-Y-BUARTH LEAD.—R. Prince, May 23: The ground in the 70 south driving still continues much disordered, a change being daily expected. Very satisfactory progress has been made in the 90 north driving, the ground being of a highly mineralised character. The stop at the end of the 90 west is worth about 1 ton to the fathom. The stop in the roof 15 ft. The stop in the 90 north is fully 2 tons (12 ft. wide). The stop in the 100 west about 5 cwt. with promise of early improvement. Treavham's string yields 15 cwt. to the fathom. Tribute pitches have also been set in the 80 and 112. On the washing-floors we are busy.

ORAVEN MOOR UNITED.—David Williams, May 23: In the main cross-cut north-east, a large quantity of water is issuing forth from the end, and the general character of the rock indicates that we are close to one of the main lodes. In Blackhill adit level east, we have just intersected the lode east of the heave, and so far as seen into, is composed of limonite, barites, and a mixture of lead ore.

OWMYSTWYTH.—May 27: There has been no noteworthy change in the value of our underground bargains during the past fortnight. We have now a good supply of water. The ponds are again full with a good supply from the river. The dressing of ores has gone on uninterrupted during the fortnight, and good progress is being made. We shall be in a position on Tuesday next to offer our usual quantity of lead ore for sale. All the machinery is now in good working condition.

CREGIDDIG.—H. Hotchkiss, May 27: The lode in the rise east of shaft, in the 130, is 3 ft. wide, kindly in its character, with a mixture of blende and ore in the lode. The end west of shaft is going forward with fair speed in a lode of great size. Against the hanging-wall is very kindly lodestuff, mixed with blende and spots of lead ore.

DREBBY.—J. Roberts, W. Sandoe, May 25: The improvement that we referred to in our telegram as far as we have yet gone is very encouraging, as it is of some importance being closely associated with the shale course, and in the run of lead ground. As far as we have yet opened on it it looks well, and likely to continue. Although the best part of it is in the bottom of the sink yet there is a part of it going up the side of the level, and continuing up to the roof, and, no doubt will continue. Having not opened far on it as yet we cannot say so much as we shall be able to do further on, but we calculate that it is worth fully 1 1/2 ton of lead to the fathom. There is no change in the other bargains since our last report.

DEVON GREAT CONSOLS.—Isaac Richards, May 23: Wheel Maria: The cutting of the pit in the 12, at the eastern shaft, on the Capel Tor lode, is progressing satisfactorily.—Wheel Emma: Railway Shaft—New South Lode: In the 120 west, on the south part of the lode, the driftage is being carried by the side of the lode for a speedy progress.—Watson's: In the 124, at the engine-shaft, the cutting of pit referred to in the six-monthly report has been completed, and a cross-cut north is being driven for intersection of the lode, which we hope to reach in the course of a few days. In the 112, east and west of the engine-shaft, the lode is 4 ft. wide, of a very promising character, and is yielding saving work for copper and muddle ore. In the 44, east of the western shaft, the lode is 2 ft. wide, composed of strong capel, with peach, fluor, and some good quality copper and muddle ore. All the other points of operation are without important alteration.

DRAKESWALL.—T. Gregory, May 28: The lode and branches carried in sinking the engine-shaft below the 103 are worth 101. per fathom, with more branches in the north side. The shaftmen are now engaged in putting on pumps and fixing stages round the lift, &c. There is no change in the stopes below the 60, east of Mathew's shaft, the branches producing a good deal of arsenical muddle and tin ore intermixed with the same.—North Lode: The lode in the 50 and west is worth 71. per fathom for tin, and the stratum good. The lode in the 40 and east is worth 51. per fathom. The lode in the rise in back of this level is worth 51. per fathom, in favourable ground both for progress and mineral.

DUCHY PERU.—R. and J. Nancarrow, May 26: In handing you our report we beg to say that we do not find much change in the 30 fm. level west of engine-shaft; the lode produces a little blende, but not enough to value. We have still several fathoms to drive at this level in order to reach the run of ore ground gone down from the level above, where there is everything to warrant a vigorous prosecution of the work at the 30 fm. level, and our expectations are very sanguine as to our extending this westwards. We have great pleasure in mentioning that the 70 west has greatly improved during the last few days, and it is now producing a splendid quality blende, surpassing anything that has hitherto been seen here, every indication of a profitable and profitable section of ore ground still to be opened up. We are sorry to report that 6 or 7 fms. in length of the 60 crashed together on Saturday morning last without a moment's warning; this is now being cleared with all possible dispatch, and we hope to accomplish it in a few days, as we have two tribute pitches to the west of this, and are dependent on the completion of this work in order to bring away the mineral. The other tribute pitches are producing their usual quantity of ore. All other operations are being carried on in the usual manner. The machinery in every department is in a satisfactory condition. We are weighing off three parcels of blende to-day, and are busily engaged preparing others for the market, which will be found of a much higher percentage.

EAST BLUE HILLS.—S. Bennetts, W. K. Mitchell, May 27: The lode in the 20 fm. level east end is worth 51. per fathom, and in west end at the same level it is worth 201. per fathom, for the portion of the lode carried in each end. In the 10 fm. level east end the lode is producing low quality tinuff. And in the adit east end it is worth 51. per fathom. The stopes now at work in the back of the 10 fathom level is worth 71. per fathom. Good progress is being made in the section of the engine-house.

ECTON.—W. Bowman, May 25: Since my previous report special attention has been given to the most advanced portions of development work with very fair results. Water Bank winze, sinking below the 4, is now prepared for a deeper level, the station being out to receive the winding-tackle, and a small steam-pump for lifting the water from the lode will be in working order in a few days. In Clayton engine-shaft our miners continue sending to surface the water and deadstuff from the deeper levels and old stopes. At the 110 we have found some copper ore making east from near the old chambers, 19 fms. from the shaft; at present the quantity is only small, but the quality is good, and it is quite possible that a good body of ore may have been missed by the former workmen, this lode, which would intersect the northern part of the Snackers' open. The south cross-cut at the 80 continues in favourable ground, and I am pushing this point forward towards the branch of copper ore passing down from Chadwick's winze to the adit cross-cut. The north-west driftage from Ecton deep adit is in broken ground, and may at any time be expected to intersect the carbonate ore pipe from Salt's level above.—Vivian: North-west from Clayton adit has the forebore spotted with lead and copper ore, of no value except that such indications point to richer deposits in depth, and may render valuable service in directing our operations in the deeper levels. Surface operations have been somewhat retarded by storms, but, nevertheless, fair progress has been made in this department. All machinery both at surface and underground is working well, and for the work performed is consuming a very small amount of fuel.

GAWTON.—Moses Lawton, May 26: I am exceedingly pleased with the great improvement in the 117 east, and I earnestly hope that it may lead to something good. Ours are the champion lodes of the district.

GOODEVERE.—R. Knott, May 27: The deep adit east end has been in a very hard state for the past three weeks, but it is changing again to ground of a more easy character; the end is now at 74. 10s. for 6 ft., and by the time this level is driven I hope we shall be in a good run of easy ground again. The lode is looking more promising than for some time past, it is now showing spots of rich yellow copper, and any day may lead to an important discovery.

GREAT HOLWAY.—W. T. Harris, May 28: Roskill's Shaft: In the 95 north the ground is favourable, and the joint contains nice stones of carbonate of lime impregnated with muddle and lead.—Level Engine-Shaft: The 80 east pitch in back is worth 10 cwt. lead and 1 ton blende per fathom. The 60, No. 1 pitch in back west, is yielding 1 1/2 ton lead and 1 1/2 ton blende per fathom. No. 2 pitch maintains the usual splendid appearance and productiveness—3 tons lead and 1 1/2 ton blende per fathom. No. 3 pitch in bottom east is worth 5 cwt. lead

and 1 ton blende per fathom. No. 4 pitch is producing 8 cwt. lead and 1 1/2 ton blende per fathom. No. 5 pitch continues opening out and improving; now yielding 1 1/2 ton lead and 4 tons blende per fathom. No. 6 pitch in back is worth 12 cwt. lead and 1 ton blende per fathom. No. 9 pitch is producing 10 cwt. lead and 1 1/2 ton blende per fathom. No. 10 pitch in back is producing 8 cwt. lead and 1 1/2 ton blende per fathom.—Brammock Shaft, 60 East: No. 1 pitch in back is yielding 1 1/2 ton lead and 1 1/2 ton blende per fathom. No. 2 pitch in back is worth 12 cwt. lead and 1 1/2 ton blende per fathom.—Office Shaft, 50 West: Pitch in back is producing 10 cwt. lead and 1 ton blende per fathom.—Garden Shaft: In the bottom of 40 ground congenial for the production of both lead and blende; yielding in fair quantities. Dressing making usual progress, and shall sell a good parcel of lead next week. Have to-day sampled 30 tons blende for sale June 4.

GREAT WEST SHEPHERDS.—R. and J. Nancarrow, May 26: Since our last report of the 12th inst. we have cut bearer-logs and cistern pit in the new engine-shaft; we have also fixed the plunger-lift, which we hope to set to work to-morrow, and sinking will then be at once resumed. Brown's engine-shaft will be completed to the 30 in a week from this date, when we shall at once cut a pit and drive two cross-cuts—one to intersect the south, or Mudge's lode, and the other to intersect the middle and north lode, where we fully expect good results. The end being driven west on the middle lode, in the 16, is still producing saving work, but not enough to be valued at present; it is, nevertheless, of such an encouraging nature as to lead us to expect a rich lode every fathom we open. All the surface work is being carried on with satisfaction, and the engines with all other machinery is working well.

GREEN HURLE.—James Polglase, May 21: The bottom level north of Swan shaft, 30 West: Pitch in back is producing 10 cwt. lead and 1 ton blende per fathom. We expect an improvement at this point shortly. The three stopes in the back of the 44 fm. level north are worth in the aggregate 12 tons of lead per fathom. The rise in the back of the 30 fm. level is in plate; we expect to hole the rise to the middle level next week, when the 30 end will be resumed. The vein in the middle level north is not so good, but we expect a change in a fathom or two; now worth 1 1/2 ton per fathom. No. 1 stop in the back of middle level is worth 2 tons of lead per fathom. No. 2 stop in the back of middle level is worth 1 1/2 ton of lead per fathom. The adit level north of Robinson's sump is worth 1 ton per fathom. The adit level east is progressing, with good ventilation. Dressing going on well. We have plenty of water to keep the pumping-wheel going.

HEALEYFIELD.—John Trease, May 22: The past week we have been stopping out the north end of No. 3 rise, and find the vein at least 10 ft. wide, and producing saving work for the crusher, but to-day we met with a poorer run of ground in the forehand, similar to what we found in the level driven in advance 9 fms. below. No. 1 stop in Grindstone sill is worth 9 cwt. of lead per fathom. No. 2 stop is worth 10 cwt. per fathom. This stop has a very kindly appearance, the vein is wider, and the sandstone more congenial for the production of lead. We have made good progress in driving the end south on main vein, from the cross-cut driven from the Whitwell shaft. We have cleared out the old level behind the blacksmiths' shop for 60 fms., and find the productive part of the vein in this level is some fathoms ahead of our present level below, with precisely the same lode and direction we find it in our present workings.

HOLWELL LEAD.—R. Rowlands, May 26: A portion of the heading side of the lode in the 110 west contains a mixture of lead in very promising quantity, and this will be a most valuable result, as we have a good swallow. The width of the lode in the 80 east continues the same, and the spar on the footwall is intermixed with lead ore. The tribute pitch in the 80 is yielding about 15 cwt. of lead per fathom.

MARKS VALLEY.—Wm. George, Francis Renals, May 23: Wheel Jenkin: In submitting our setting report for Saturday last, we beg to say that, finding the water is not so thick as through the winter months, we think by making some alterations in the pitwork the shaft can be economically sunk, and have there set a bargain to 12 men to sink 12 fms. at 201. per fathom, and cut up and sink the latter to be 12 by 12 ft. 6 in. under other conditions named for 301. the stuff to be drawn from them as and when required. To drive the 25 east by two men, at 71. per fathom: the lode continues to look very promising, but is not yet yielding anything to value. To stop the back of this level, west of cross-course, by four men, at 51., where the lode is worth 91. per fathom. To sink a winze below the 15, by six men, at 131. per fathom, lode valued at 121. per fms. To drive the cross-cut south, by two men, at 61. per fathom: the water is issuing very strong from the end, and the ground is of a more favourable character. To stop the back of this level, by six men, at 51., valued at 61. per fathom: five men are employed in the level below the adit, where the part of the lode carried is producing good stamping work, and quite equal to former reports.

MELANER COPPER.—John Gilbert, May 27: There is no change in the 70 cross-cut driving north of the main lode. The ground is still mixed with veins of sulphurous muddle and blende, and letting out a small stream of water. In the 110 driving west of Gundry's shaft the lode is 5 ft. wide, and yielding stones of copper ore and some saving work for tin. The lode in the 115 east of Gundry's shaft is 3 1/2 ft. wide, yielding occasional stones of copper ore, and is also worth 51. per fathom for tin. In the 120 east of shaft the lode is 4 ft. wide, yielding 1 1/2 ton of copper ore per fathom, and a little tin, but not sufficient to value; but we are expecting this level to meet with some good tin ground very soon that we passed through in the level above. The lode in the 120 west of shaft is 3 1/2 ft. wide, yielding good stones of copper ore, and is also worth 61. per fathom for tin. This ground will pay very well indeed, as it is moderately easy for breaking. We have got very nearly through the south part of the lode in the 130 east of shaft. The lode altogether is now 10 ft. wide, composed of spar and peach, and yielding 1 1/2 ton of copper ore per fathom, and some saving work for tin; a very strong and well-defined lode. The part of the lode carrying in the 120 west of shaft is 5 ft. wide, yielding good stones of copper ore and some rich work for tin. We have not had any of the stuff sampled from this end for the past fortnight, as we have been waiting for the shaft to be ready for drawing through; but I should say the lode is quite as good for tin as when last reported (101. per fathom). The sumpmen have completed Gundry's winch-shaft from the 100 to 130, and we commence this morning to draw the tinstuff from the bottom level. They will now begin to put in pen-house, &c., to prepare for sinking the engine-shaft below the 130. The stopes are not looking quite as well as when last reported, but the tribute pitches are yielding their usual quantities of copper ore. The water under ground is abating a little. Gundry's engine is now going 5 1/2 strokes per minute, which is very easy for the time of the year.

MID-DEVON COPPER.—James Neill, May 23: Ashaft sunk by 12 men with rock-drills, and by hand labour, 2 ft. 2 in.; total distance below the 91 fm. plat, 7 fms., 3 ft. 3 in. There is no perceptible change in the character of strata this week. The water is flowing very freely in the bottom from two small fissures in the western end just intersected, which has increased the quantity to be pumped, but have no doubt it will again drain itself considerably.—Surface: All miners are working well, and water abundant, it having rained daily this week and on some heavy days.

NEW CARADON.—S. Richards, May 27: The engine-shaft now being down to make a 60 fm. level, the men are busily engaged cutting pit, and when finished we shall drive towards No. 1 lode, which is a large kindly-looking lode where seen in the upper levels, and provided its underlie continues as seen in the levels above, we expect to reach it in about two months from this date.

NEW TERRAS.—Richard Eade, May 28: The clearing out of the ground for the foundations for the new engine-house, &c., will be completed this week. I have proved a much tougher job than we anticipated, as we have a hard bed of rock. The masonry will commence this week on Monday next, and we shall push them on with all the speed possible. The men's changing-house will be completed in a few days, and all our other work is progressing most satisfactorily.

NEW WEST CARADON.—N. Richards, May 27: No. 5 lode west at the 33 is large and kindly over 3 ft. wide, but is at present very iron, consequently it is unproductive. We hope soon however to get through this channel of ground which we have only just reached, and find the lode improved. There is no particular change to notice in the cross-cut south at this level since the report for the meeting.

NORTH GREEN HURTH.—James Polglase, May 21: The men have commenced driving west on the new vein, the haul is thrown down about 2 ft., and from the vein is issuing a nice stream of water. No new feature in the other workings.

NORTH TRESKERRY.—Pryor and Son, May 27: Since our last week's report we have met with a cross-course in the deep adit level, east of cross-cut, on No. 1 lode, which has for the time disordered the lode. The lode in this level west of cross-cut continues just the same as when last reported on. We may here remark that the lode in the 120 west of shaft is 5 ft. wide, yielding good stones of tin, which has been opened on east and west of the Highburrow shaft, a distance of about 50 fms., where the lode varies in size from 5 to 12 ft. in width. We also find Highburrow shaft is sunk about 10 fms. below the shallow adit level, and the greater portion of the water from this shaft is now being drained by the deep adit level, the driving of which is being pushed towards this important point with all possible speed, and judging from present appearance we hope to be able to resume sinking of Highburrow shaft its present bottom, where the lode is fully 12 ft. wide, from which we have broken rich stones of tin, and also some blende and copper ore. The communication of this shaft to the deep adit level will, in our opinion, lay open another large section of profitable tin ground, as well as for good ventilation for exploring Nos. 1, 2, 3, 4, and 5 lodes further west. We are repairing and putting footway in Highburrow shaft. In order to carry out the above work, the plan will show you the great distance we have from this point Highburrow shaft to the western boundary of this property, which is over 2000 ft. All other points of operation on the other tin lodes are without change to notice since our last report.—Baron's Engine-Shaft: The six men referred to in our last report have completed the cutting down of the south side of the shaft and the road has been completed to be in good condition, and made quite safe from any accidents, either to the pitwork or 30 in. pumping engine. The 36 cross-cut men are making good progress, the country is strongly mineralised, and the end letting out water freely as if nearing the lode. The lode in the 24 fathom level is further improved, and now worth 7 tons of copper ore per fathom, which makes us very sanguine as to the value when intersected in the 38 and deeper levels. Should the weather prove favourable the masons will complete the building of the stamping-engine house in about a fortnight from to-day, against which all the heavy portions of the engine—boiler, cylinder, fly-wheel, &c., will be brought close to the house, in order to be able to expedite and economise as much as possible. The mason-work around four of the bidders for the tin dressing-floors is completed, and the dresser and carpenter continue to make good progress in their several departments. The No. 1 boiler will be put in its place as soon as the scaffolding of the engine-house is taken down. The engineers and other men have finished the taking out of all the engine at Wheel Jane, and are at present engaged in taking out the woodwork, and the traction-engine will resume carrying the necessary parts, such as bob, cylinder, &c., in the course of a day or two. The smiths are busily engaged in preparing the necessary ironwork for the same, and all the surface work is still covered in levelling and excavating ground for the tin floors, and all the other work is being carried out with all vigour in order to get the steam stamps at work as soon as possible.

OLD SHEPHERDS.—R. and J. Nancarrow, May 26: Harvey's shaftmen are progressing in the sinking of the shaft as fast as circumstances will admit, seeing we have so much water to contend with. We estimate that it will require about six weeks from this date to reach the 137, where we purpose driving with all possible dispatch to unwater the deepest point sunk by the old workers. In driving the 112 east of Harvey's to the level at which the lode is large, and is showing itself more promising for the production of lead.

The 92 cross-cut north is still letting out a large quantity of water, which we have always considered a favourable indication for meeting with rich lode. This end is now advanced so far from Old Sump shaft that we find the air very light, and this puts a check on our progress in driving. There is not much change to note in our tribute department. We weighed off a nice parcel of lead and another of blende to-day, and are busily engaged dressing others for the market. Notwithstanding that the water course has been about 7 1/2 strokes per minute, with 18-in. pitwork, our 30-in. engine is mastering its work satisfactorily, and all the other machinery is working well.

PATERSYKE AND CLARKE HILL.—J. East, May 21: The drift going south in Sir John's vein from Archer's rise has improved in width, but the mineral is about the same, so far we do not meet with any ore. From the way the beds are rising we are expecting to cut some of the east and west veins every week. There is no change in the cross-cut west from this drift; a strong, good sill has put on at the forehand. If there is no change at this point this week we will start, and prove the vein we cut through, as I think it will prove to be Clargill Head vein. The level at Allenshead is closed at the entrance, and has not got into open ground yet; it is only a short distance to where the vein crosses the vein, and it is wholly in the Tynemouth limestone for 500 yards going west.

PLUSHES.—T. Trease, May 23: We have sunk our shaft during the past fortnight 3 fms., 3 ft. We have passed through a bed of quartz about 4 ft. thick, which has somewhat retarded our progress. Our shaft is now down 23 fms., 3 ft., and we commenced to drive a cross-cut east yesterday to intersect the lode. If the lode continues its bearing and underlie as seen at surface, we shall have to drive about 9 fms. to intersect it. We shall push on this work as fast as possible.

POLCROFTON.—W. H. Martin, J. Richards, May 27: Highburrow Shaft: The drawing lift is fixed from the 50 to 80, and is working satisfactorily. The divisions and sleepers are also fixed, and we are now fixing the bad casing. Tomorrow we shall draw from the 60 level; the 60 east will be pushed forward with a full force of men, to reach the dip of ore gone down in the bottom of the 50 east level. The lode in the 50 east end is of much the same character as last reported, the water continues to flow from the breast. In the 40 east, south cross-cut, we intersected a small branch, which contains a little muddle.

ROMAN GRAVELS.—A. Waters and Sons, May 28: The 125 south is going forward on a lode 4 ft. wide, worth 2 tons per fathom. The 111, south of engine-shaft, is in a lode 3 ft. wide, worth 3 tons per fathom. The 111, south of No. 2 rise, is worth 2 1/2 tons per fathom. The 95 and 80 south are without change for some time past. The stopes and other points are yielding ore in satisfactory quantities. We have to-day sampled 100 tons lead ore for sale next week. We expect to have a parcel of blende next sampling.

RUSSELL UNITED.—John Bray, May 23: The tramroad in the deep adit level is made complete to the end. Yesterday we commenced driving the level east. I cannot say much about the lode for a few days, being in the influence of the cross-course. Stephens' shaft is down 8 ft. below the 57 fm. level, and part of the pit cut. We hope to complete the 9 ft. sink in the shaft and the pit 17 Wednesday next. We are busily engaged in making all necessary preparations for the stamps.

SOUTH CONDURROW.—William Rich, William Williams, H. King, May 27: The lode in the 52, west of Marshall's, carries a little tin. In the 64 end we have intersected the cross-course; we are now driving south to cut the lode west of the cross-course. There is no change to notice in the 93 and west. The 1, west of Plantation, on the flat lode carries stones of tin; the 89, east of King's, is worth 91. per fathom; the stop in the back of this level is worth 101. per fathom; the 70 and east is worth 101. per fathom; the stop in the back is worth 121. per fathom; the winze in the bottom of the 60 is worth 101. per fathom. We have not yet reached the north part of the lode in the 60 cross-cut; the stop in the back of the 60 is worth 81. per fathom. The 50 end east yields low quality tinstone; the rise in the back of this level is worth 101. per fathom; the stop in the back of this level is worth 121. per fathom; the 40 and east is worth 61. per fathom; the stop in the back of this level is worth 121. per fathom; the stop in the back is worth 121. per fathom.

SOUTH TOLCARN.—May 26: The 80 west, on Fraser's lode, is showing great signs of improvement, and more water is now issuing from it; it is worth about 51. per fathom for tin and copper. In the 70 west we have passed through what we believe to be the cross-course, consequently for a few days the lode was not so productive; but I am pleased to say that the lode is again improving, and believe from indications that in the course of a day or two it will more than equal its former value; the present value is 81. per fathom for copper and tin—a highly promising lode. The lode has just passed through the same cross-course as at the 70, the lode here was disordered; this lode also is again improving, and now worth for tin and copper 51. per fms. a very kindly lode. These ends are in the Pendaves ground worked under arrangement with South Condurrow. The 80 end is not yet up to our boundary. The 70 east, on the flat lode, is still large and improving in appearance as we advance, and there is no doubt of larger quantities of tin to be found in this direction.—Gossan Lead: There is no change to notice in the 45, east of shaft, we are passing through a rather hard bar of ground just now. Since my last report we have opened on Fraser's lode, east of the 36 cross-cut, about 8 ft.; the lode is large and getting more defined as we proceed, producing little copper and tin ore. Nothing more discovered as yet in the 80 cross-cut south.

STANDARD LEAD.—W. H. Borsae, May 23: The north and south lode in the new shaft continues to improve, and I hope we are approaching good lead again. The country on the eastern side is more settled, and the lode is more compact, showing a branch of lead worth 15 cwt. per fathom, and another blende fully 20 cwt. per fathom. The stop, south of the shaft, at the 33 fm. level is looking exceedingly well, and is producing fully 3 tons of lead and blende per fathom. No other change to notice underground. The water is still very hindering for our masons, but I hope they will finish the wheel pit in a few days. We have our wall up to take the winding drum. The new pulley stands are complete, and we are raising some of them to-day. Dressing is going on with all dispatch possible, and we shall shortly have two good parcels ready for sale.

TREVAUNANCE UNITED.—W. Vivian, May 23: We are pushing on the sinking of the engine-shaft, and the erection of the engine with all speed. No change in the mine to notice since the last report.

WEST CARADON.—N. Richards, May 27: Gilpin's lode in the 33 is not at present producing so much ore as for some little time past, but is still a kindly looking lode for the production of large quantities of copper ore. No. 5 lode east at this level is 1 foot wide, but not yielding much ore, but from present appearance and composition we consider it will improve again shortly.

WEST GODOLPHIN.—T. Hodge, P. Hodge, May 26: The 92 north, west of the course of the caunter, is progressing with fair speed towards Bellingham's lode, the fissures dispersed through the lode, which is getting larger in width in sinking, and highly mineralised, and showing signs of nearing a productive lode. Nothing has been done in the 92, east on Pink lode, since our last; these men have been engaged with fixing our new lift, and improving to strengthen our connections from the 50 to bottom; our pitwork is now in capital condition, and equal to our working requirements for some time to come, except our timber work for our end-of-bob at the 30, and this will receive our next attention to repairs. The winze sinking below the 30, on the junction, is producing saving work for tin from the caunter lode. The stop in the back of the 60 is worth 101. per fathom. The 80 west end is advancing in a kindly lode. The lode in the back of the 80 east is worth 71. per fathom. The stop in the back of the 80 west is worth 81. per fathom. The winze below the 50 west is worth 81. per fathom. The winze below the 40 west is worth 81. per fathom. Two stopes in the back of the 40 west are worth together 151. per fathom.—Bellingham's Lode: The lode in the 70 east maintains its promising appearance of being near a productive lode. Taking the run of this lode east of the present fore-bread to our eastern boundary, we have 350 fms. to explore; our end is now at about the centre of our set on the line of Bellingham's. We find on this examining our surface that Great Work makes the line of Godolphin Hill, so we have very reason to suppose that in extending this level we shall open up a valuable mine, and this we cannot say how soon we may discover.

WEST KITTY.—William Vivian, May 28: In the 81 fathom level driving east of No. 1 rise the lode is worth 101. per fathom. In the driving east of No. 2 rise the lode is worth 181. per fathom. In the 60 fathom level, driving east of No. 3 rise, the lode is worth 121. per fathom. In the 40 fathom level, driving east of No. 1 rise, the lode is worth 101. per fathom. We have six stopes working, which vary in value from 141. to 501. per fathom.

WEST PHENIX.—William Rich, Richard Guyan, May 25: We have removed the penthouse in Norris's engine-shaft at the 70 fm. level, and have fixed the skip-road below this to the 84. The men are now engaged in sinking under the 84 for depot and for trip pit, as soon as this is accomplished we intend to drive the 84 fm level east and west on the course of the lode. In the 70 east of Norris's shaft we are driving on the north side of the lode, the ground is easy for exploring, and the lode large, but hitherto it has been unproductive for tin. The 32 end west is without material alteration—in a strong and kindly lode.

WHEEL CASTLE.—John Boyns, May 23: The cross-cut west, in the 80 south, is being driven by two men and boy. The 70 north is being driven by two men. The lode is producing a little tin, but not enough to value. The 60 south is being driven by four men and boy; lode worth 81. per fathom for tin. The 35 cross-cut west is being driven by two men. We have one man and boy breaking iron ore to the adit level, one man and boy making a place to deposit it, and three men fixing the tramway from the shaft to the shipping place.

WHEEL CROBRO.—H. Phillips, P. D. Holman, May 28: The men are making fair progress in driving the 158 west of new shaft, the lode contains capel, and muddle with a little water issuing from the breast, which has hitherto been dry; the lode is similar to that in which the fine course of ore is embedded at 144 or level above. The lode in the 144 driving east of new shaft will yield fully 3 tons of good arsenical muddle per fathom. It is rather stiffer for progress in this strong lode of muddle at this point, as it is in many cases the forerunner of a good copper lode. In the 144 west we are driving by the side of the lode which better progress is being made, the lode which has been taken down yielding 1 ton of copper ore per fathom. There is no change in the 108 cross-cut driving south, or the rise in the back of the 73 since last reported. Our stoping ground continues to yield in the aggregate 47 tons of copper ore, and 21 tons of arsenical muddle per fathom.

WHEEL GRENVILLE.—F. Hodge, May 26: The 205 east end is worth 51. per fathom. The 178 east end produces stamping work. One stop in the back of level is worth 181. per fathom. No. 1 stop, in the back of the 165, is worth 181. per fathom. No. 2 is worth 131. per fathom. No. 3 is worth 161. per fathom. The 150 east end is in a promising lode, but not to value. The stop just behind adit end is worth 501. per fathom. The 120, west of the shaft, is worth 81. per fathom. The 130 west is worth 101. per fathom, cutting 140 west is worth 121. per fathom. We are clearing the 150 and 160, cutting pit, and repairing the shaft. This done the ends will be started. There is no other change.

WHEEL METAL AND FLOW.—W. Argall, S. P. Curtis, May 27: We have completed the cutting down of Watson's engine-shaft, and shall now have to sink below for putting in cistern, after which we shall fix the pitwork. The fly wheel is fixed, and next week we hope to put in stamps axle, after which we shall sink in two pulverisers. We have three men laying down tramroad from the floor to the flow

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**THE MINING JOURNAL,
Railway and Commercial Gazette,**

LONDON, MAY 30, 1885.

TRANSVAAL GOLD MINING LAW.

A perusal of the Transvaal Draft Gold Law, 1885, as published elsewhere, will, we think, be read with some degree of astonishment at its Draconian severity, as proposed to be established by the Volksraad, or the Government of the Transvaal Republic. If this be a specimen of the future legislation of that country there need be little fear of the Boers being long troubled with the presence of any other countrymen but their own who respect themselves or their liberty, for surely none but Boers could ever live under such iniquitous laws as this now proposed. The framers of this intended gold mining law are evidently novices in the art of law making, with crude ideas of justice, and absolutely ignorant of the requirements of gold mining legislation. Had the Act been entitled an Act for the Prevention of the Development of the Resources of the Country it would be rightly named, for although such a ridiculous measure may, according to Boer legislators, be suitable to Boers, by enabling them to perpetuate a system of slavery in its worst form upon every unfortunate creature who is not "pure white" in colour, it is not likely to be tolerated or borne by any intelligent section of men belonging to other nationalities. If the object is to drive all British subjects out of the country, and to deprive them of their civil rights and property, then it will, no doubt, have the desired effect, but will British subjects, or those of other nationalities, willingly submit to such iniquitous measures? It is surprising that amateur legislators in attempting to deal with a subject they do not understand, should endeavour to do so devise a law for gold mining that will tend to strangle the industry instead of giving encouragement to its development. The production of gold in most countries appears to possess a peculiar influence on the minds of New Chum legislators to try their pretence hands at framing measures to make it almost a penal offence for intelligent, industrious, and enterprising men to follow an honourable occupation. The enlightened framers of this measure appear to have copied some of the worst features of the gold mining regulations of Victoria in the early days from 1851 to 1854, which were of so iniquitous a nature, and carried out with such rigour, that they drove an otherwise peaceful and orderly population into armed rebellion against the Government, and led to severe fighting, and the loss of many lives. The battle of the Eureka stockade at Ballarat, between the armed diggers and the British troops exposed to the world the unjust and iniquitous gold mining regulations that inexperienced legislators had imposed upon them, and which they had in vain implored to be amended. It would have been well for the legislators of the Transvaal, if they desired to encourage the development of the auriferous resources of their country, had they invited the co-operation, and taken the advice, of a few experienced gold miners and others who have had practical knowledge of the working of the mining laws of Australia and America, and while avoiding any errors that have existed or do now exist in the laws of these countries, have so framed a measure that would have given encouragement to the development of gold mining, and an assurance of personal safety for those following the occupation in the Transvaal. We fail to perceive why the term "digger" should be used at all, the word "miner" being the true expressive word. Miners do not dig gold from the earth like potatoes, therefore the word is a misnomer. Gold mining regulations in the Transvaal should be under two classes, quartz mining and alluvial or placer mining. The areas for claims to be in proportion to the depths or natural difficulties of the operations. The license fees for miners, as proposed, are exorbitant; what with the ordinary license for a digger, 12l. a year, and for a prospector's license 6l. a year, and cutting firewood 3l. a year, make a total of 21l. a year for an enterprising miner to pay the Transvaal Government for the privilege of occupying a claim of about 1/2 acre of otherwise worthless land to prospect for gold. These licenses are to be paid monthly, in advance, or in default subject to a fine of not less than 5l. or more than 25l., and, as it stands to reason, the unfortunate miner who cannot raise 1l. to buy his monthly license, could not pay his fine of 5l. to 25l., he has to go to gaol for a term of not less than one month or more than six months. Pleasant prospects for the unlucky miners if there are many of them; the Transvaal Government will need have extensive prison accommodation. Great stress is

laid upon the colour of the digger, storekeeper, or other individual who is privileged to exist under Transvaal law. He must be a "white" man (who is to be the judge of colour the law does not state), or he cannot hold a license to dig for gold, or live in a house, or build a store or other dwelling. It would occupy too much space to particularise the many objectionable features and clauses in this proposed Act, but clauses 62, 63, 64, and 65 are gems in their way. According to clause 64 it will not do for some of our prominent members of the House of Commons to go to the Transvaal, for if "guilty of sedition, rebellion, or any unlawful resistance of the Government, or lawful authority on the fields, shall, in addition to the punishment fixed by law for such offence, forfeit all his property situated on such field to the Government. The person or persons on whose information any person may be found guilty of one or other of the said offences, shall be entitled to the half of the value of the forfeited property." If a rich gold field opened out, the Transvaal informers, jurymen, justices, and Government would have a fine old time in dividing the spoils of successful miners by working up a charge of "sedition or any unlawful resistance of lawful authority." Clause 71 says:—"No coloured person, coolie, or Chinese can hold a license or be in any capacity engaged in mining, otherwise than in the service of white men." We wonder what is to be the degree of colour and who is to define the shades of light and darkness. Are all the Boers perfectly white in the skin as also in the heart? Clauses 72 and 73 are simply monstrous and ridiculous. Thus a miner may be working a mine with hired labourers, some of whom might be British subjects and born on British soil, whose skin may not be exactly white, and may be hundreds of miles away from any bank where he can sell his gold for cash, and if he pays his wages in gold by weight to his workmen he is liable to a fine of 500l. or three years' imprisonment. Clause 74 is very rough on the Chinese, coloured person or coolie who "if found selling, bartering, or disposing of rough precious metals, or uncut stones, or being in possession of such, shall be punished by the infliction of not more than 50 lashes and imprisonment for a term not exceeding 12 months, with or without hard labour, and forfeiture to the State of such raw metal or stones." Clause 77 says—"Anyone who shall merely be guilty of attempting to commit such offences as wilfully damaging a mine, claim, or machinery, &c., shall be punished with imprisonment with hard labour for a period of from one to ten years, according to circumstances." An expert who reported unfavourably against a Transvaal mine would have a rare chance before a jury of Boers. Clause 79 may be termed horrible, most horrible, the horrors of slavery intensified by a set of men posing as Christians, and setting themselves up as rulers of a nation. It says—"That any coloured domestic servant or employee who shall neglect his work, or be saucy or use abusive language to his master or mistress, or any other person lawfully placed over him shall be punished by a fine of not more than 2l., and failing payment to imprisonment with or without hard labour not exceeding one month, or by flogging not exceeding 25 lashes; and a servant, not being a coloured person, shall be punishable by a fine not exceeding 5l., or imprisonment not exceeding three months." English domestics will hardly be likely to make a rush to the Transvaal. The legislators of the Transvaal have in this proposed law well verified the adage of "Sitting a beggar on horseback and he will ride to a coloured person." There is colour enough in this proposed Transvaal Gold Law, 1885, to tinge with a blush of shame everyone professing a spirit of manly or Christian feeling in any civilised country. These are the enlightened rulers of the new-born nation, who were feted and made so much of here in this and other centres of civilisation only a few months since, and this is the use, or abuse, they propose to make of their newly acquired power!

CORNISH SMELTERS, AND THEIR INTERESTS.

"Supremely selfish" has been the virtual appellation by which Cornish smelters have been described during the past few days. The apparent contempt for all interests save their own on the part of the smelters has been the subject of warm, if not in a few instances impolite, comment in mining circles. Can disinterested persons fail to appreciate the strong case which the shareholder and the miner have when the local tin standards should have been advanced a fortnight since? Even then foreign tin was 84l., and a rise of 2l. was warranted—was generally expected. Tin reached 85l., and no movement came; the price hovered between 84l. and 85l., advanced and receded like the pendulum of a clock, but no sign, no effort of the smelter; and, when on Wednesday foreign tin found buyers at 86l. 12s. 6d. cash, the grim observation was whether the "powers that be" would improve the price by 4l. per ton on the following day. Thursday's conference of smelters resulted, as we know, in a rise of 4l. per ton; and no wonder, when tin reached 86l., which should have brought a rise of 6l. a ton. A correspondent informs us that he has heard several mine agents speak in far from complimentary terms of this, the most recent policy of the smelters. It is argued that an undue advantage has been taken by the smelters, who, it is contended, have pursued this course full well knowing that a series of Cornish mine meetings were being held. Captain WHITE, of Wheal Agar, for instance, refused to accept local prices on Wednesday, at Mellanear; but supposing, as has been the case, but which now, it is pleasing to say, is practically unknown in Cornish mining, the three-monthly meeting had been on the same day, Captain WHITE would have been either compelled to accept the smelters' price, or, in refusing, to throw accounts into utter confusion. How unfair this procedure of the smelter is to the mine agent is plainly evident from the fact that when foreign tin is beyond the quotation on which the local standards are based—when another rise is demanded by the circumstances, and the agent declines the price offered him, preferring to wait for the morrow, it is just possible that, instead of the advance being made when the smelters meet, a sudden and considerable fall may take place on the London markets, and a reduction in standards be the unenviable experience. To give a recent case—we have it from the lips of the agent himself—we cite this as confirming the selfishness of the smelters. A parcel of tin was sent to a house—and foreign tin was so far above the local standards that the agent refused the price tendered him—and hastened home, to hear in the course of a day or two—although the metal was maintaining its improvement—that the period allowed for settling had expired, and that the firm would be obliged by the matter being closed. "I replied," said the agent, "that I would not sell; that I would take back the tin, and pay them with pleasure for the space the tin had occupied. I heard no more complaints, standards directly afterward went up, and I had my price." How, it is asked—and asked with reason—are Cornish smelters so exceedingly anxious, with a drooping metal market, to knock down the standards; and how, with a rising market, do they proceed with wormlike movement? There are many who think that Mr. RUSSELL was not far wrong when, years since, he argued that a mine like Dolcoath should smelt its own tin. A remark of ours as to what was elicited at a recent meeting has excited in certain interested quarters feelings opposed to satisfaction. It was not calculated

to give untold pleasure to this or any other firm that might pursue the same practice; we allude to the fact that while the smelters are supposed to cling desperately together, neither to favour nor to offend any customers, neither to offer more than local standards admit of, nor to tender less, yet in the exceptional instance we have in mind practically a rise of 2*l.* was granted on the then standards. And after this it has been suggested why did we give the matter publicity. Why, indeed!

The Mining Market: Metals, Ores, &c.

METAL MARKET—LONDON, MAY 29, 1885.

IRON.	£ s. d.	£ s. d.	TIN.	£ s. d.	£ s. d.
Fig. 100, f.o.b., Clyde...	2 10 0	—	English, ingot, f.o.b. ...	91 0 0	92 0 0
Scotch pig, No. 1 Gart...	2 10 0	—	bars ...	92 0 0	93 0 0
Coltress ...	2 11 6	—	refined ...	93 0 0	94 0 0
Clyde ...	2 8 0	—	Australian ...	89 0 0	89 2 6
Govan ...	2 2 0	—	Banco ...	89 0 0	—
Wales, f.o.b. Wales ...	4 12 6	—	Strait ...	89 0 0	—
in London ...	5 2 6	—	COPPER.		
Stafford ...	8 2 6	—	Tough cake and ingot ...	47 10 0	48 10 0
in Tyne or Tees ...	4 15 0	5 0 0	Best selected ...	48 10 0	50 0 0
Swedish, London ...	8 15 0	9 10 0	Sheets and sheathing ...	53 0 0	54 0 0
Wales, at works ...	4 12 6	—	Flat Bottoms ...	59 0 0	—
Shrewsbury, in London ...	6 15 3	7 0 0	Wallaroo ...	60 0 0	nom.
Plates, ship, in London ...	7 0 0	—	Burra, or P.O.C. ...	53 0 0	—
Hoops, Staff. ...	6 0 0	5 0 0	Other brands ... nom.	51 0 0	53 0 0
Half rods, Staff. in Lon.	8 2 6	8 0 0	Chili bars, g.o.b. ...	44 15 0	—
STEEL.			QUICKSILVER.		
English spring ...	12 0 18	0 0	Flasks, 75 lbs. war. ...	5 15 0	—
cast ...	30 0 45	0 0	PHOSPHOR BRONZE.		
Sandwich, keg ...	12 0 0	—	Alloys H. ...	105 0 0	—
bag, ham. ...	12 0 13	0 0	V. ...	105 0 0	—
Ball at works ...	4 15 0	5 0 0	VI. and VII. ...	125 0 0	—
Light, at works ...	5 15 0	8 0 0	XI. ...	95 0 0	—
LEAD.			Duro A, Duro B ...	95 0 0	—
English pig, common ...	11 0 11	5 0	BRASS.		
L.B. ...	11 2 6	11 7 6	Wire ...	5 1/4 d.	5 1/2 d.
W.B. ...	11 5 0	11 10 0	Tubes ...	7 1/2	—
sheet and bar ...	11 15 0	11 17 6	Sheets ...	5 1/2	—
pipe ...	12 5 0	12 7 6	Yel. met. sheath. & sheets ...	4 1/4	4 1/2
red ...	13 5 0	13 7 6	TIN-PLATES.		
white ...	14 10 0	14 10 0	Charcoal, 1st quality ...	0 18 6	0 19 6
patent shot ...	13 12 6	—	2nd quality ...	0 16 6	0 17 6
Spanish ...	10 17 6	—	Coke, 1st quality ...	0 13 9	0 14 3
BRICKS.			2nd quality ...	0 13 3	0 13 9
Ordinary brand ...	13 10 0	—	Canada, Staff. or Gla. ...	9 0 0	9 5 0
special brand ...	13 12 6	—	at Liverpool ...	9 0 0	9 5 0
English Swans ...	15 0 0	—			
Swedish ...	16 15 0	17 0 0			

* At the works, 1*l.* to 1*s.* 6*d.* per box less for ordinary; 10*s.* per ton less for Canada; 1*l.* 5*s.* per box more than 10 quoted above, and add 5*s.* for each X. Terms—plates 2*s.* per box below tin-plates of similar brands.

GENERAL REMARKS.

With the exception of tin, which has been very active and strong, our markets have remained exceptionally dull during the past week, and business has been mostly transacted at easy prices. The violent fluctuations in tin, however, and the rapid advances from time to time effected in values of that metal have attracted the principal attention upon our market, and copper until to-day, with all its weighty stocks and increasing supplies, has been neglected; iron, with its undisturbed quietude, has kept steady; lead, with its manifest and prolonged depression, has been easy; and silver has remained difficult of sale, and in tin-plates and other metals there is no improvement, except quicksilver, which has been advanced 2*s.* 6*d.* It is plain that there is no general improvement, no real revival, and the restoration in values of tin is due partly to moderate spot stocks, but principally to the covering of "bear" prompts, which has induced certain operators to give considerable support to the market, and which accounts for forward prompts of that metal being below cash. However, tin must be reckoned as the exception, not as the rule, and speaking generally, metals are in anything but a satisfactory condition. The extraordinary cheapness of money should give operators for the rise a powerful lever, and induce them to push up prices and support the market at the advance; but with the exception of tin it has been far otherwise, and the low prices have only been followed by still further reduced rates. Political affairs also seem clearer, but this fails to produce any favourable influence, and in many instances business appears to have come almost to a standstill. Notwithstanding that cheap money facilitates the holding of stocks, and in a great measure tends to promote business, yet at the same time its cheapness signifies bad trade, and also proves that there is a plethora of money that cannot be utilised advantageously. But we need not stop here to consider why there is such an abundance of money or the probabilities of future supplies, but there is the other all important question to trade, How is it that there is such a little output for money? Why is enterprise not encouraged thereby and briskness given to the present inanimate plant, mills, and machinery throughout the country? It is because there is no confidence in the stability of any improvement, and confidence must be restored before traders will be induced to purchase beyond their most urgent requirements, notwithstanding that facilities of finance may be freely offered. Other inducements may also present themselves, but with the absence of confidence there is the consequent absence of the backbone to trade, and without which any stimulus that may arise can only have a temporary bearing upon the market. The more cheerful tone that exists upon the Stock Exchange has not failed to make some slight favourable impression upon our markets, and to-day especially has there been a greater desire to do business. Tin, which has been advancing all the week, has further strengthened, and copper has recovered more than what it had lost during the first part of the week. These sudden movements, however, do not tend to establish confidence; but, on the contrary, have rather the opposite effect, and operators, although gloomy one day, are cheerful the next, and hence fluctuations are frequent. It is, however, a noteworthy fact that while in tin there may be some room for improvement, yet in copper the heavy supplies would lead to the conclusion that there can be no thorough recovery until a complete change takes place, and any rally which may every now and again be made can be nothing more than a mere market fluctuation.

COPPER.

This market has remained very dull, and prices of Chili bars have tended towards a lower level, and up to yesterday there had been a fall of 20*s.* per ton, but this has again been fully recovered to-day. There was some hesitation shown to accept less than 4*l.*, but after a slightly lower figure than that had once been accepted the market speedily fell away to 43*s.* 6*d.*, from which point there was a slight rally, the improvement being most marked yesterday, probably on account of the reduction in the Bank rate, and a recovery of 5*s.* was effected, but this improvement brought forward sellers, and the market once more became easy, and to-day has again made a sudden advance. There has now been a tolerably heavy fall, and it is thought that in consequence there may be some recovery, as a rebound not infrequently succeeds any serious reaction, and to-day's movements may be the forerunner of that improvement, but there are no hopes entertained of continued improvement; in fact, the general feeling appears to be that prices must recede, whilst supplies are kept so much in excess of the regular requirements of the trade. Nevertheless, it is satisfactory to find that deliveries are well sustained, and the constantly growing demand for this metal is the most striking favourable feature, and probably the only really favourable feature in the market. There is every evidence to show a constant and rapid development of the

demand, the trade is expanding in all directions, and there are numerous new and fresh outlets for the consumption of copper; but for all that there is no relief given to the market, because supplies are kept above the legitimate wants, and, therefore, while it is confidently anticipated that deliveries for this month will prove to be satisfactory when the statistics are made up early next week, yet, at the same time, stocks are also likely to show an increase. The Board of Trade Returns for the whole of this year have a depressing influence upon prices, for they show a considerable increase in the imports, and a large falling off in exports, compared with the same time of last year.

IRON.

This market remains dull, and prices steady. Owing to the Whitsuntide holidays there has been very little business done this week, and many of the works have not yet reopened. The vacation, however, does not make much apparent difference to the trade. Business was so very dull before that very little inconvenience is occasioned by the present break. Many of the works have been availing themselves of this opportunity for repairs to their machinery, and although, in consequence, there has necessarily been some check to deliveries, and some pause in the regular output, still buyers are not likely to have to wait long for the delivery of their iron upon the resumption of business, for orders are not being booked very freely, and there will be no difficulty in delivering those on hand with all possible dispatch. However, this temporary cessation of work has in some instances been accompanied with rather more firmness in prices, although buyers will not pay dearer rates, and sellers invariably, instead of letting the business pass by them, accept previous quotations, although they are indisposed to accept anything less. Before slight concessions were very frequent upon the already very low rates for most descriptions of manufactured, but not so this week. Sellers require fully previous rates, and in some instances ask rather more. But the raw material, on the other hand, has been by no means so strong, and holders of Scotch pigs have been willing to accept reduced values, and not unnaturally so with the numerous and repeated adverse features which are continually cropping up in the Warrant Market. The continued falling off in shipments is the most striking feature, and last week's figures showed a reduction of over 7000 tons compared with the same week of last year. Stocks are increasing, and thus adding further depression to the market, and the demand for makers' iron generally keeps very quiet and without any quotable change in prices. At the opening of the Glasgow Warrant Market after the recess business was done at 41*s.* 9*d.*, sellers remaining over thereat, and on Wednesday transactions were carried through at 41*s.* 8*d.*, while yesterday the tone was dull and the price gradually receded from 41*s.* 7*d.* down to 41*s.* 6*d.*, and to-day, after opening at 41*s.* 6*d.*, the price closes for the week at that figure. The shipments last week were 9130 tons, against 16,240 tons for the same week of last year, being a decrease of 7110 tons, and which make the total shipments for the whole of this year 182,602 tons, against 227,114 tons for the same time of last year, and 247,549 tons for the similar period of 1883. There are still 92 furnaces in blast, and the public stock has been increased by a further 830 tons, and now amounts to 596,898 tons, against 596,068 tons last week. The imports of Middlesborough pig-iron into Grangemouth last week were 7040 tons, against 5480 tons for the same week of last year, being an increase of 1560 tons, and which makes a total increase for the whole of this year compared with last of 46,920 tons. The Middlesborough market has been quiet, and business rather interfered with by the holidays. Second-hand lots of No. 3 are offering at 32*s.* 9*d.* for prompt delivery, and makers' price is 33*s.* to 33*s.* 3*d.*, while No. 4 forge is quoted at 32*s.* 6*d.* to 32*s.* 9*d.* It is anticipated that the production of Cleveland iron will be further reduced by the conversion of two more furnaces for hematites. Shipments are still limited, and it is expected that the total for this month will be at least 20,000 tons less than in May last year. Up to the middle of this week they were 55,661 tons, against 62,078 tons for the same time of the previous month. There is little change in manufactured bars, being quoted at 5*l.*, angles at 4*l.* 12*s.* 6*d.*, and ship-plates at 4*l.* 17*s.* per ton. At Wolverhampton many of the works are still closed, and sellers are hopeful that during the cessation of work they may be enabled to accumulate orders, and thus implant greater tone to the market. Certain manufacturers of bars, hoops, and strips have refused various orders on account of the current low rates, and in consequence, in isolated cases, where brands are stipulated for, dearer rates have had to be paid. Hoops are quoted at 5*l.* 10*s.* to 5*l.* 15*s.*, strips and common bars from 5*l.* 5*s.*, merchants' bars at 6*l.*, and sheets at 6*l.* 10*s.* to 7*l.* per ton. Trade at Birmingham is also quiet, and only a few specifications have been given out, and orders have been principally for stamping sheets and engineering requirements. In pigs Northampton and Cleveland sorts have been much neglected, but a few sales are reported in Derbyshire and Staffordshire part-mines.

TIN.

A very large business has been transacted in this metal, and prices have been strong, advancing considerably every day. Buyers have been anxious to purchase, and sellers only conspicuous by their absence. There are many features in the market which tend to impart strength, and this being so we shall yet see still higher rates, since the buying is very strong just now, and the higher rates seem rather to increase than diminish it. In the first place there is the light stock on the spot, and this being firmly held, prices necessarily advance. Of course we need not stop here to consider what supplies may be forthcoming. Upon that point there is a difference of opinion, and consequently forward prices are not so good as cash. Certain it is that the stock here is only small, and easily managed, hence prices are firm. Further, it is generally thought that the supplies both from Straits and Australia have been very light this month, so that the stocks may be light when the statistics are made up to-morrow or early next week. Again, whilst there are numerous "bear" prompts uncovered, strength must continue to be implanted to the tone, and although there may be violent fluctuations, the tendency will doubtless be towards a higher level, and animation will remain the principal characteristic of the market. Every feature just now points more to a temporary than a permanent improvement. The smallness of the present stocks, the limited supplies for the time being, the low price for forward prompts compared with those for cash, and also the covering in of "bear" prompts, are all features which give the idea of a present rather than a permanent improvement, and, therefore, whilst we may see some further recovery in the immediate future, the ultimate result of the market must depend, as it always does, upon forthcoming events. The average price realised at the Dutch sale yesterday was 52 1/2 g., which is equal to 88*l.* per ton in Holland.

SPELTER.

A moderate business continues to be done at 13*l.* 10*s.* for ordinary brands, and 13*l.* 12*s.* 6*d.* for specials.

LEAD has been firm, with business doing at 10*l.* 17*s.* 6*d.* for Spanish, and this remains the price, with rather sellers over.

STEEL.—With the exception of rails, which are in fair demand, the market keeps dull, and prices steady.

TIN-PLATES.—There is a moderate business being transacted both in cokes and charcoals, and prices are unaltered.

QUICKSILVER.—A good business was done during the week at 5*l.* 12*s.* 6*d.*, and the importers now hold for 5*l.* 15*s.*

Our usual telegram from Cornwall this (Friday) evening says: The advance of 4*l.* in the standards made yesterday by Cornish tin smelters has caused general satisfaction, although opinions were expressed that advance was somewhat tardily made. The share market closes strong, with a demand for leading shares, including Dolcoath, East Pool, Wheal Basset, and West Basset. The dividend-paying mines will be greatly benefited, as black tin is worth at least 3*l.* per ton more than it was a month since, and this rise will come as so much more profit, there being no increased costs in returning the tin. The future prospects of the tin market are regarded with much satisfaction. Speaking at Truro to-day Mr. Pendarves Vivian, M.P., spoke on the progress of copper productions, and pointed out that whereas in 1879 the total output was 149,156 tons, in 1884 it was 211,613 tons. He thought that the price for copper would never again reach the old standard. It is reported that wages of surface labourers have been increased at two mines in Camborne district, a further increase with higher prices for mineral being promised.

THE MINING SHARE MARKET was rather quiet in the earlier part of the week, the dealers having been chiefly engaged in preparing for the settlement of the usual fortnightly account which commenced on Wednesday and ended on Friday, and was rather heavy in several prominent shares. Towards the close the rise in tin, and the long looked-for advance in the standards for ore in Cornwall improved things generally, and caused a further rise in quotations of the old tin mines where a rise of 4*l.* per ton means a considerable increase to profits. Those mostly dealt in have been Dolcoath, East Pool, Wheal Grenville, Tincroft, East Blue Hills, South Frances, West Frances, Wheal Crebor, Wheal Basset, Prince of Wales, and others.

TIN has risen during the week about 4*l.* per ton, and the standards for ore in Cornwall advanced 4*l.* on Thursday. This gave a fresh impetus to the market, and several mines have further advanced in quotation. Blue Hills are quoted 1/2 to 1/4; Carn Brea, 3/4 to 4. Dolcoaths kept quiet at 69 to 71 till the reported rise in the standard, when they advanced to 70, 72. East Pools have risen 2*l.* on the week, and leave off 43, 45; Cook's Kitchen, 9 to 9 1/2. East Blue Hills advanced to 25*s.*, and a large business done; the shares leave off 1 1/2 to 1 1/4. The report states that the bottom level is worth 25*s.* per fathom east, and 20*s.* per fathom west, for only a portion of the lode carried in each end. New Kitty, 1/2 to 1; Polbarro, 2 to 2 1/2; South Condurrow, 7/4 to 8; South Crofty, 3 1/2 to 3 3/4; South Frances, 9 to 9 1/2; Tincroft, 6 to 6 1/2; Trevaunance, 2 to 2 1/2; West Basset, 2 to 2 1/2. West Frances are still weaker, at 8 1/2 to 9; West Kitty, 8 1/2 to 9. Wheal Grenvilles have further advanced to 10, 10 1/2. Wheal Kitty (St. Agnes), 10*s.* to 15*s.*; Wheal Metal and Flow, 1/2 to 1; Wheal Peevor, 10*s.* to 15*s.* Killfireth, 1/2 to 1, call paid; at the meeting the accounts showed a loss on four months' working of 468*l.* 16*s.*, and a debit balance of 664*l.* 7*s.* A call of 2*s.* per share was made. The agents hoped when the intersection of the lodes took place, in about six months, something very productive would be found. Wheal Basset's have further advanced to 9 1/2, 10: the result of the meeting last week showed a profit on six months' working of 542*l.*, which was considered very satisfactory after the mine had been making calls for 13 years, during its transition state from copper to tin. Tin sold for the six months, 218 tons, realised 10,016*l.* In the bottom of the mine a shoot of tin has been gone through about 20 fms. long, averaging from 10*l.* to 30*l.* per fm. Wheal Agar, 18 to 19; at the meeting the accounts showed a profit on three months' working of 1604*l.* 3*s.* 10*d.*, and a dividend of 5*s.* per share was declared. The tin sold (145 tons) realised 6578*l.* 17*s.* 10*d.*; arsenic, 489*l.* 17*s.* 3*d.*; the labour cost for three months, 3541*l.* 8*s.*; merchants' bills, 1633*l.* 7*s.* 5*d.*; lords' dues, 221*l.* 5*s.*; balance at bankers, 2706*l.* 7*s.* 5*d.*; Phoenix, 1/2; New Cook's Kitchen, 10*s.* to 15; Tolgullow United, 1 to 1 1/2; Mounts Bay, 2*s.* 6*d.* to 3*s.* 6*d.*

COPPER has been rather flat, and very little business done in mines, with the exception of Devon Great Consols, Wheal Crebor, and Prince of Wales. In most instances prices are nominal. Bedford United, 1/2 to 1. Devon Great Consols, 2 to 2 1/2; the agent reports that the 112 east is looking better, so is the 44 east of western shaft, and he hopes soon to have to report a course of ore in each end. Mellanear, 1/2 to 1; New West Caradon, 1*s.* to 2*s.*; West Caradon, 1*s.* to 2*s.*; New Caradon, 1*s.* to 2*s.*; South Caradon, 1/2 to 3/4; Gunnislake (Clitters), 5*s.* to 7*s.* 6*d.*; Prince of Wales, 5*s.* to 7*s.* call paid; at the meeting the accounts showed a loss on four months' working of 769*l.* 0*s.* 7*d.*, and a debit balance of 1012*l.* 12*s.* 6*d.* A call of 2*s.* per share was made. The report of the agent was of a satisfactory character, and the prospects, he states, never better than at present. Wheal Crebor, 1 to 1 1/2; the points in operation are worth on the aggregate 48 tons of copper ores and 24 tons of mundic per fathom. The 144 east is now worth 3 tons of mundic per fathom. Mundic at this mine being the forerunner of good copper lodes. West Seton, 4 to 4 1/2.

LEAD mines continue somewhat neglected, and prices nominal. The lead market we understand is decidedly better. The War Office bought 1000 tons of pig-lead this week at 11*l.* 5*s.* per ton, in lots of 250 tons, from the London Lead Company, Pontifex, Wood, and Co., Enthoven and Co., and Locke and Co. Vans are quoted 15-16 to 1 1-16; Great Laxey, 7 1/2 to 8; Leadhills, 1 1/2 to 1 1/4; Roman Gravels, 3 1/2 to 3 3/4; Craven Moor, 3 1/2 to 4; East Rose, 3*s.* to 5*s.* South Darren, 5*s.* to 6*s.*; the shaft is 3 1/2 ft. below the 130 fm. level. No particular change in last report. D'Eresby, 15*s.* to 20*s.*; Weardale, 1 to 1 1/4.

FOREIGN MINES.—Almada and Tinto, 3*s.* to 5*s.*; Birdseye, 1 1/2 to 1 1/4; Balkis, 1*s.* to 2*s.*; Callao Bis, 1/2 to 3/4; Cape Copper, 3 1/2 to 4; Chile Gold, 4*s.* to 6*s.*; Colorado, 1 1/2 to 1 1/4; Copiapo, 2 to 2 1/2; Frontino and Bolivia, 6*s.* to 8*s.*; Hoover Hill, 5*s.* to 6*s.*; La Plata, 4*s.* 6*d.* to 5*s.* 6*d.*; Lisbon-Berlyn, 2*s.* 6*d.* to 3*s.* 6*d.*; Mysore, 1 1/2 to 1 1/4; Nundydoo, 8*s.* to 10*s.*; Organos Gold, 4*s.* to 6*s.*; Orita, 1/2 to 3/4; Columbian Gold, 8*s.* to 10*s.*; Panullico, 1 1/2 to 2 1/2; Chontales, 2*s.* 6*d.* to 3*s.* 6*d.*; Richmond, 2 1/2 to 3 1/4. Santa Barbara, 1 to 1 1/4; the accounts for 12 months ending the 31st of December last show gold sales 11,023 1/2 16*s.* 6*d.*, and a loss of 2926*l.* 1*s.* 9*d.* The interest paid of 10,000*l.* debentures was 1000*l.*, and general expenses in England 836*l.* 11*s.* 8*d.* Schwab's Gully, 3 to 3 1/2; United Mexican, 2 1/2 to 3 1/4; Victoria Gold, 6*s.* to 8*s.*; Oscar, 11*s.* to 13*s.*; the manager telegraphs on the 28th inst. mines as last reported, gold every shot from Daw's Bratsberg, 1/2 to 3/4; the bargains throughout the mines are valued at an aggregate of 302*l.* 10*s.* A cargo of ore is expected to be dispatched at the beginning of June, and if the ore can be got down in time two or three more cargoes will follow soon. Montana, 1 1/2 to 1 1/4; Potosi, 5*s.* to 6*s.*; St. John del Rey, 6 1/2 to 7 1/2.

EARLY SHOPPING.—A drawing-room meeting was held on Friday afternoon, May 22, at the residence of Mrs. Bateman, 64, Longridge-road, Kensington, under the auspices of the Early Shopping Association. The chair was taken by Mr. W. T. M'C. Torrens, M.P. Letters of apology for non-attendance, but expressing sympathy with the objects of the meeting, were read from Mr. Jacob Bright, the Rev. Carr-Glynn, and others. Mrs. Ferrier, the Chairman, and Mr. Larking having spoken, Miss Jessie Craigen moved a resolution that in order to make general early shopping possible it is absolutely necessary that the public should discontinue the practice of late shopping and become members of the Early Shopping Association. This was seconded and carried. A vote of thanks to Mrs. Bateman for kindly placing her drawing-room at the disposal of the society, and also to Mr. Torrens for presiding, terminated the meeting.

Mining Notes.

It will be seen from a perusal of the comments on another page referring to the demand for tin, that this is of no ordinary character. As we have remarked in previous issues, all the influences pointed, in our opinion, to a rise; and from the fact that this rise has been so abnormally deferred we concluded that when it did come it would be of a very decided character. Our conclusions have been confirmed entirely and very promptly. The demand which could wholly change the appearance of a holiday market from supreme indifference to active excitement is not of every-day occurrence. Tin shareholders will do well to hold for a further advance.

THE gloom which has hung over a great part of this industry for several years is now happily dispersing. On the south side of Carn Brea hill things in general are looking much better. Following the important discoveries lately made in West Frances, Wheal Grenville, and South Frances on the Great Flat lode, Wheal Basset has just come to the front showing a good profit for the first time during 13 years of heavy expenditure, which is very encouraging to the other progressive mines on this lode. Wheal Uny especially, immediately to the east of Wheal Basset, which has just passed into the hands of an energetic and influential mining company, is about to be reworked, and the general opinion of practical tin miners respecting it is very favourable, the most important feature being the long looked for change from slate to granite in the bottom of the mine, a change which has always had a very favourable influence on Cornish tin lodes. Dolcoath was poor for tin until it reached the granite, and little doubt is entertained that when further developed in this rock a good and durable mine will result. This lode has already been proved to be productive fully $2\frac{1}{2}$ miles in length, and there are already five mines working on it at a profit, the aggregate market value of which is 253,500*l.*, and almost daily increasing in value, and likely to go very much higher, especially if tin further improves in price. To the west of Wheal Grenville there is New South Condurrow (part of South Condurrow), and South Tolcarne on the same lode, and although these are in a progressive state there is little doubt entertained as to their future success. In fact this lode is productive for a much greater length than any other tin lode in the county, and extending east and west in virgin ground beyond these mines, and is undoubtedly the Great Trunk lode of the district, the extent of which up to the present is unknown.

A very encouraging feature to progressive mines has just transpired in Wheal Grenville; some 20 years ago the eastern part of the mine, East Grenville, after a successful career for copper, which gave place to tin in the bottom, became suspended for want of sufficient drainage power, and it is now found by working up under this from Wheal Grenville, if it (East Grenville shaft) had been continued a little deeper it would have come down on the Great Flat lode, on the confluence or junction of this and the East Grenville lode in the centre of a very extensive and rich piece of tin ground, in fact in the very heart of the mine, and the present company now reap the benefit of these workings, which cost at least 20,000*l.* On the north side of Carn Brea things have also a more cheering aspect. Carn Brea which for some time has had a rather gloomy outlook, is now much improved. Tincroft has also improved, and Cook's Kitchen is approaching the junction where a rich deposit of tin is expected, while Dolcoath, East Pool, and Wheal Agar maintain their value. The same may be said of St. Agnes district, the late discoveries of tin at East Blue Hills, and Blue Hills continue, and some of the other mines are said to be improving; East Blue Hills is attracting much attention, as the outlook here is exceedingly good, and will shortly be paying good dividends. There is no doubt a brighter day for Cornwall; the great drawback now is the treating by hand labour enormous quantities of low grade tin-stuff, and if the Inventions Exhibition would bring to their aid something to simplify and cheapen the process so that low grade ores could be worked at a profit, it would be a very great stimulus to mining.

CAPTAIN R. PRYOR manager of North Treskerby, asserts that in that mine they have made such a discovery as has been unknown in Cornwall for the past 20 years. Then, all we can say is, that the advent recently into a prosperous state of such mines as Wheal Agar, Wheal Basset, Wheal Grenville, and West Frances, is fairly eclipsed. All will hope Baron Grant has in North Treskerby the prize Capt. Pryor predicts. They have cut four lodes, says Capt. Pryor, and they have a bunch of tin in every lode. Nor does he think the day is far distant when North Treskerby will rank among the leading mines of the county.

An interesting speech was delivered by the manager of North Treskerby—the mine Baron Grant is bringing out—at Killifreth meeting, on Tuesday. North Treskerby, as our readers will recollect, is on the Limited Liability principle, and, responding to a remark from the Chairman, Capt. R. Pryor contended that the Cost-book System, and the Limited Liability principle had been abused as applied to Cornish mining. Both could be carried out satisfactorily. In congratulating the pursuer on the fact that there were no large holders in the property, Capt. Pryor had a pertinent hit at one or two gentlemen. Large holders Capt. Pryor thought unwelcome, and gave as examples "Mr. Pike's mines." They had been labouring under a bad price for tin and copper, but having seen high prices four times he yet hoped to see a good price again. There is no lack of money in the county. There would be no difficulty in obtaining 150,000*l.* in London for any promising speculation, and Capt. Pryor believes there is a great future for Cornish mining. Concentration was the great thing in Cornish mining. Capt. Pryor also spoke highly of the value of local cross-cuts, and said more mines would be at work now in the county if cross-cutting had been more largely practised. He had driven as many cross-cuts in his day as few men of his age.

GENERAL sympathy is being expressed in Cornish mining circles with Mr. William H. Rule, mine sharebroker, at his failure. Not only has Mr. Rule figured as a leading speculator in Cornwall, but he is well known on the Metal Exchange in the city. Mr. Rule's pluck is by all acknowledged. Only several years ago he could have sold out of West Wheal Seton at a profit of many thousand pounds, and down to the past few months he was a large holder in this mine. In addition to keeping a heavy interest in Cook's Kitchen, and a number of other mines, Mr. Rule, by his own energy started Camborne Vean, taking no less than 3000 shares—one-half of the mine, and this interest has only just recently been acquired by Mr. Thomas Fidler, of Newbury, who is now striving to float the mine in 50,000*l.* on the Limited Liability principle. Mr. Rule's shares are now held by a banking firm in Cornwall that has, it is known, advanced many thousands to Mr. Rule to enable him to pay his calls. On several occasions of late years Mr. Rule has not been as discreet as he might have been. He has unsparingly criticised bankers, and merchants, and mine agents, at times going further, most people

have thought, than the circumstances warranted. Mr. Rule truly had the courage of his convictions, and his speeches at Dolcoath are remembered for their bluntness. Mr. Rule has now lost three fortunes made in mining, and so spirited an adventurer deserves, with the dawn of better prices in tin, yet another fortune.

"We have any amount of ground on the lode we are working, both east and west, and then we have south lodes and north lodes," said Captain Mitchell, of Killifreth, subsequent to the meeting in connection with that mine held this week. "It is an old saying, and a true one," he continued, "that cross-cuts never begged their bread." He pleased the shareholders by observing that with regard to the cross-cut in Killifreth he considered they had almost a mine in itself. When they intersected the lodes, he ventured to say, they would have a profitable sett. Then, too, Captain Mitchell is of opinion that the eastern ground is almost a mine in itself. With a better price for tin the manager thinks they will be able to pay the adventurers for all the outlay they have made.

A petition for the winding-up of the Explosives Company (Limited) has been presented to the High Court of Justice, Chancery Division, by Samuel Gray, of Upper Avenue-road, Hampstead, a contributory of the company, and the petition is directed to be heard before Mr. Justice Pearson, on June 6.

THE directors of the Billiton Tin Company state that from 9000 to 10,000 peculs of Billiton tin in slabs will be sold by public auction at Batavia (island of Java) on the following dates:—June 25, August 29, October 29, December 24, February 25, and April 28. The quality of this tin will not be inferior to that of Banca.

TINCROFT, as, in the period when it had sunk so low, we predicted it would do, is coming to the front; with an advance in the price of tin there appears to be improvement in a number of Cornish mines. We hear the 234, east of Martin's, has much increased in value. This part of the mine is where the improvement took place some months ago, and sent shares to 11*l.* It is intimated that before long the mine will be financially sound—sound in this sense, that credits will more than meet debits. It is most likely that the lode recently cut at the 315 cross-cut, and is being opened up, will prove productive for tin.

It is said the employees at Carn Brea and Tincroft will have their wages immediately increased. They in these mines richly deserve the increase; their wages now are lower than the pay given in most Cornish mines.

WE find it stated that the Stray Park portion of Dolcoath is desired by a syndicate, who will give 15,000*l.* for it, and that Dolcoath committee ask 20,000*l.* If the offer has been made it must have been within the last few days, as, in a recent issue, we authoritatively said no offer had been made. And, as we announced, Stray Park part of the sett has improved, and we now hear continues to improve. Great results are expected when this ground is proceeded with.

It is reported in the St. Just district that there is a syndicate that contemplates restarting Balleswidden Mine with a capital of 80,000*l.* No visitor can visit this district without a pang of regret that such a big sett was ever compelled to be thrown idle.

In these days when so many grievances are thrust before Parliament, when especially in the mining division of Cornwall there is a complaint at the system of mine leases, it is a pity to find yet another ruse, which as soon as it becomes generally known will be commented on. Camborne Vean has for the past year or two been worked on a limited scale, and during the past few months preliminary steps have been taken, and are now in progress, for launching the mine in 50,000*l.* There is, or was, a fine engine-house erected by the old company, and which would have received the requisite machinery. The terms of the lease had been granted, but those who are interested have awoke to the fact that the representatives of the lord are quickly removing the engine-house in order to furnish stone in the erection of houses on the estate. A respected Cornish mine manager informs us that not long since—and the agent is such of a dividend-paying concern—he practically acquired a sett for a company, he had also the terms of the lease, and one strong point in the floating of the company was that they would not require to put up an engine-house, as there was one on the mine. Everything was therefore practically arranged, when he too found the lord was removing the engine-house placed there by other hands than his. The syndicate was so chagrined that, on the advice of the agent and following their own inclinations, they threw up the sett.

Is it a fact that the lode in the bottom of Camborne Vean would run out of the sett into Carn Camborne in less than 20 fms. further sinking? And is it also a fact that the last assays from the bottom of the shaft gave a produce varying from 12 lbs. to 19 lbs. of tin to the ton of stuff?

THE Llanhilleth Colliery in the Ebbw Valley, with the cottages, plant, and machinery, colliery horses, stores, &c., connected with it, are to be sold by auction at the King's Head Hotel, Newport (Mon.), on June 7. At the same time valuable wharfage property on the river Usk will be sold. Full particulars will be found in our advertising columns.

THE mining machinery, materials, and effects of the North Metal Mine will be sold on the mine, by order of the Court of Stannaries, on June 9. Details will be found in our advertising columns.

MR. Alfred Thomas, official receiver of the Great Holway Lead Company (Limited), writes:—"I was in hopes of being able to raise, by means of debenture bonds, the sum of 5000*l.*, which, had I succeeded in doing, I should have been able to discharge the debts of this company in full, but inasmuch as the total amount subscribed is 2500*l.* only, I am unable to do so. I am, however, able to pay the creditors 10*s.* in 1*l.* in full discharge. The above subscriptions are made by the shareholders conditionally upon the whole of the creditors agreeing to accept the terms. Should there be any who object, this offer must fall through, and I shall be compelled to exercise the power I hold and sell the mines and machinery on behalf of the debenture-holders, in which case the creditors would get nothing. Most of the creditors acquiesce in the arrangement."

THE meeting yesterday of the Prince of Wales Mine was short and satisfactory. A great improvement shortly is looked upon as certain, and in order to put the mine in a strong financial position a call of 2*s.* per share was made. Captain Roberts considers that the prospects for the future were never better than at present, having the additional chance of the new lode, which can be wrought in the same time and at almost the same cost.

WE notice that our special notes dealing with Cornish mines are much appreciated by the local journals, especially by the *West Briton*, which, though published nearly a week later, never fails to reproduce them. We do not mind, but it is well for Cornish mining men to remember that the earliest information is to be found in the Journal.

At a meeting of the Isle of Man Mining Company (Limited), on Tuesday last, a dividend of 2*s.* per share was declared.

THE secretary of the Montana Company (Limited) announces the following telegram received from the manager at the mine, dated May 22:—"Third week May mill crushed 639 tons, yielding \$11,370."

THE directors of the United Mexican Mining Company have received the following telegram:—"The excess of returns over outlay on the mine of San Cayetano de la Ovejera for the week ending May 23 is \$5400."

THE Richmond Consolidated Mining Company (Limited) have received the following telegram from the mine at Eureka, Nevada:—"Week's run (one furnace) \$21,000, from 306 tons of ore. Refinery, \$15,000."

AN extraordinary general meeting of the Russell United Mines Company (Limited) will be held on Tuesday next, for the purpose of considering the subjoined resolutions:—"That the capital of the company be increased to 50,000*l.* by the creation of 14,000 new shares of 1*l.* each, and that such shares be issued at a discount of 15*s.* per share." "That the 2700 shares in the capital of the company which have been forfeited be reissued at a discount of 15*s.* per share, and be offered to the members holding the existing shares of the company, or otherwise disposed of in the same manner as is by clause 10 of the Articles of Association provided with respect to new shares."

THE Pitangui Gold Mining Company (Limited) has a difficulty in making a quorum at its general meetings. That called for the 29th ult. failed on this account, and in consequence another is convened for the 5th June, at 45, Drury-buildings, Water-street, Liverpool.

A FOUR-MONTHLY meeting of the shareholders of Killifreth was held, on Tuesday, Mr. Tregoning (the pursuer) presided. Labour costs and merchant bills were 2870*l.*, and tin 2381*l.* The loss was 468*l.*, bringing the debit balance to 664*l.* The tin sold was just over 54 tons.—The Chairman said that the tin credited had been sold, all labour costs had been paid, and all merchants' bills had been charged to the end of April. No mine in Cornwall could be better financially, and their policy must be the safest and surest one. A call of 2*s.* per share was made. The report of the agents was a satisfactory one.

MR. C. J. HARVEY, who has recently returned from a visit to the West Coast of Africa, informed the shareholders of the Akankoo Company, on Wednesday, that in his opinion they possessed one of the best properties on the coast, with unequalled facilities for working. He said that the mill duty, in full work, is calculated at 50 tons a day, and 25 working days a month will give 1250 tons; but allowing for contingencies, and putting the output at 1000 tons per month, and estimating the yield at 6 dwts. per ton (the lowest yield yet obtained), the return of gold will be 300 ozs. per month. The directors are evidently pushing on the operations with vigour, and, if their expectations are fulfilled, the mine will, before long, be in a paying condition.

A MEETING of the adventurers in the North Busy United Mine was held yesterday week, Mr. H. Lowry presiding. The accounts for four months, read by Mr. Woodward, the pursuer, showed a debit balance of 289*l.* The agent, Capt. John James, stated in his report that the prospects in the 15 fathom level in the eastern part of the sett had considerably improved, and the lode recently cut would form a junction with another lode in about 12 or 15 fathoms driving, where a good deposit of tin might be expected. Capt. Trevethan said the cross-cut could be driven for 35*s.* per fathom, and a large lode would be reached in about three months. At this point three lodes would come together, and a grand deposit of tin might be looked for. The Chairman explained that the costs of the mine were very limited, and the points in operation were well worthy of development and should be pressed on. A call of 2*s.* per share was made.

IN regard to the action brought in the Stannaries Court, Truro, by a miner named Donithorne, of Newlyn East, and others, against the New Terras Mining Company, the Vice-Warden on giving his decision said, however much he regretted acting adverse to the jury, he felt bound in this case to grant a new trial, on the ground that the verdict of the jury was against the weight of evidence. It is possible that more will be heard of this case.

It was explained by the Chairman of the Mellanear Copper Mine, at the meeting on Thursday, that the smallness of the dividend (6*d.* per share) was entirely due to the very low price of copper during the past year. An encouraging feature in the mine is the fact that tin, which was made at the 120 fm. level, has gradually improved in richness as greater depth is attained, and that at the 130 west the lode is valued at 10*l.* per fathom for tin. It is scarcely necessary to remind investors in British metal mines that the well-known Dolcoath Mine, which was originally a rich copper mine, has changed its character, and become a tin mine. The tin in sight at Mellanear is valued at 900*l.*

AN IMPROVEMENT IN ROCK-DRILLS.—During the recent meeting of the Institute of Mining Engineers one of the most interesting excursions was to the Government works at Flood Rock. There Lieutenant Derby, resident engineer, showed an improvement that he had made in rock-drills. Instead of the ordinary solid drill, he uses a hollow steel bit attached to a hollow drilling rod by a copper screw ring. This crown bit, which has a serrated edge, is used for cutting the whole length of the hole by changing it from one rod to another. It cuts a circular groove, leaving a core which breaks when it gets an inch or so long, and is then crushed by the next blow. Further, he has applied the principle, long used in the diamond-drill, of having a current of water flowing constantly through the drill, carrying away the debris, and leaving always a clean surface of rock for the drill to strike on. The water connection is made by a tube passing through the upper end of the cylinder, and working as a plunger in the piston. The water pressure required, which is slight, is there easily obtainable, as the workings are all under water, and the roof leaks badly in many places. The increase in work done is really remarkable, an advance of 16 ft. in one eight-hour shift by the old drill rising to 25 when the new form was substituted. The invention is said to have saved the Government about \$20,000 in the Flood Rock work alone. The only valid objection to the drill seems to be the extra blacksmithing work necessary in making and keeping it in order. A writer in the School of Mines Quarterly states that the Messrs. Rand have obtained a controlling interest in the patent for this drill, and will soon put it on the market.]

BRITISH DIVIDEND MINES.

FOREIGN DIVIDEND MINES.																
10000	Alamillos, I, Spain*	2	0	0	3/8	1 1/4	1 1/4	2	17	11	0	1	3	Mar.	1875	
10000	Almada and Tirlito Consoi., s*	1	0	0	3/4	3	5	0	6	3	0	0	1	May	1886	
10000	Australian, c, South Australia*	7	7	6	2	2	1 1/2	2	1	11	0	0	1	6	July	1884
10000	Birdseye Creek, c, California*	4	0	0	1 1/4	1 1/4	1 1/4	1	9	0	0	2	0	Dec.	1884	
10000	Bratsberg, * c, Norway*	2	0	0	0	3/4	3/4	3/4	3	4	4 1/2	0	1 1/2	Mar.	1884	
30005	California, * c, Colorado	1	0	0	3/4	5 1/2	5 1/2	5 1/2	0	3	0	0	0	Aug.	1884	
10000	Cape Copper Mining, * c, South Africa	8	0	0	34	32	34	61	17	0	0	0	0	Mar.	1882	
10000	Colorado United, c, Colorado	1	0	0	1 1/4	1 1/4	1 1/4	1	14	6	0	1	0	May	1885	
10000	Copapo, c, Chili* (24 shares)	3	10	0	2 1/2	2	2 1/2	2	8	9	0	1	0	Mar.	1885	
10000	El Cailao, g, Venezuela (foreign)	40	0	0	70	65	70	36	16	0	0	16	0	Nov.	1884	
10000	English & Australian, * c, S. Aust.	2	10	0	—	—	—	—	3	8	9	0	1	Mar.	1884	
200	Eng.-Aus. g, Vict., * pref. (20000 o.)	1	0	0	—	—	—	—	0	3	5	0	3	Apr.	1882	
25000	Fortuna, I, Spain*	2	0	0	3 1/4	2 1/4	3	8	17	1	0	2	10	Mar.	1885	
72000	Frontino & Bolivia, g, New Gran.*	2	0	0	3 1/4	6	8	8	12	10	0	0	1	Dec.	1883	
10000	La Plata, s, I, Londville	1	0	0	6 1/4	6	6 1/4	6 1/4	3	0	0	0	7	Oct.	1882	
10000	La Plata, s, I, Spain*	1	0	0	6 1/4	6	6 1/4	6 1/4	19	16	10	0	3	Mar.	1885	
10000	Marbello, Rio, Ore.	10	0	0	2 1/4	1 1/2	2 1/4	0	10	0	0	10	0	June	1882	
18184	Mason & Barry, * c, Portugal	10	0	0	8 1/2	8 1/2	8 1/2	4	3	0	0	8	0	May	1885	
10000	Montana, * c, U.S.A.	2	0	0	1 1/4	1 1/4	1 1/4	0	8	0	0	0	8	July	1884	
10000	New Hoover Hill, g, North Carolina.	0	10	0	7	5	7	—	0	1	3 1/2	0	0	Mar.	1884	
10000	Oxford, g, Nova Scotia (foreign)	0	4	0	3 1/4	3 1/4	3 1/4	0	1	6	0	0	1 1/2	Mar.	1884	
82500	Quebrada, Rail, Land, & Cop, Venezuela	10	0	0	3 1/4	3	3 1/4	—	2	0	0	0	0	May	1885	
10000	Fanuelillo, c, Chili*	4	0	0	2 1/4	1 1/4	2 1/4	2	0	9	0	2	0	Sept.	1880	
10000	Fontiguita, g, Brazil (in. 6000 \$1 pd)	0	18	0	—	—	—	—	0	0	0	0	0	0	Sept.	1880
14000	Fontiguita, g, Brazil (in. 6000 \$1 pd)	30	0	0	4 1/4	4 1/4	4 1/4	30	3	1	0	11	3	Dec.	1883	
100000	Fort Phillip, g, Clunes*	1	0	0	1 1/4	1 1/4	1 1/4	1	14	2	0	0	10	Feb.	1881	
10000	Rara Fortuna, * c, Argent. Republic.	1	0	0	—	—	—	—	0	3	0	0	1	July	1882	
54000	Richmond Consol., s, Nevada*	5	0	3	3 1/4	2 1/4	3 1/4	15	1	6	0	5	0	Nov.	1884	
1000	Rio Tinto, c, Mortgage Bds., Huelva	100	0	0	99	96	99	5	5	per cent.	—	—	—	Apr.	1885	
10000	Ditto, shares	10	0	0	9 1/4	9 1/4	9 1/4	4	16	0	0	16	0	May	1885	
30000	Santa Barbara, * g, Brazil	0	10	1	1 1/4	1 1/4	1 1/4	0	12	9	0	1	0	May	1885	
10000	Schwabe Gully, s, Kimberley foreign	10	0	0	3 1/4	3	3 1/4	0	6	10	0	0	0	Jan.	1885	
10000	Schwabe Gully, s, Australian Mining Co.*	1	0	3	3	2 1/2	3	20	p. cent.	—	—	—	—	Oct.	1885	
10000	Ditto, New	2	10	0	3 1/4	1 1/4	1 1/4	20	p. cent.	0	1	0	Oct.	1884		
12000	Sierra Buttes, g, California*	2	0	0	1 1/4	1 1/4	1 1/4	2	7	0	0	0	6	Oct.	1884	
144825	Ditto, Plumas Eureka	2	0	0	1	3/4	1	3	3	6	0	1	6	Oct.	1884	
150000	St. John del Rey (15 St Stock and multiple deal in)	—	—	—	67 1/2	72 1/2	—	5 p. c.	for half-year, June	1882	—	—	—	—	—	
100000	Tambracherry, g, Wynnad	1	0	0	3 1/4	4 1/4	3 1/4	0	6	0	0	0	6	Aug.	1882	
100000	Tharals, c, s, Spain (567330 issued)	2	8	0	5 1/4	4 1/4	5	7	6	6	0	8	0	May	1885	
14000	Tollins, * c, Spain (A shares)	5	0	0	3 1/4	2 1/4	3 1/4	6	2	2	0	0	0	Jan.	1885	
10000	Ditto, (B shares)	5	0	0	3 1/4	2 1/4	3 1/4	6	2	2	0	0	0	Jan.	1885	
10000	Victoria (London), g, Australia	1	0	0	3 1/4	3 1/4	3 1/4	0	13	10	0	0	0	Feb.	1885	
143221	Victoria Mexican, g, Australia	1	17	0	3 1/4	2 1/4	3 1/4	0	2	0	0	2	6	Nov.	1884	
10000	Victorine (Nevada, U.S.) Deb.	1	0	0	—	—	—	0	4	6	0	2	6	Nov.	1884	
10000	Western Andes, s, Colombia	5	0	0	5	4 1/4	5	4	16	3	0	10	6	Aug.	1884	
6180	W. Prussian (5500 pref. sh. £10 pd)	10	0	0	—	—	—	—	4	2	0	0	0	Apr.	1881	
14000	Yorke Pen., c, South Aust. Pref.	1	0	0	3 1/4	3 1/4	3 1/4	0	3	0	0	0	3	0	May	1885

NON-DIVIDEND MINES—continued

Share.		Paid.	Last wk.	Clos.	pr.
5000	North Grogwinton, s, i, Cardiganh.	1 0 0	0	34	34
2000	North Herodfoot, i, Liskeard	0 13 8	6	—	—
5000	North Levant, t, c, St. Just	14 12 0	8	—	—
50000	North Molton, s, c, ss, i, Devon	1 0 0	6	—	—
50000	North Trekerby, s, c, Agnes	1 0 0	6	—	—
8000	Northern, s, i, Durham	8 17 0	10	—	—
40000	Oxel Tor, s, t, c, s, Calstock	1 0 0	—	—	—
80000	Old Shepherds, s, i, Cornwall	1 0 0	6	4/	6/
80000	Owen Veon & Tregur, s, t, c, Maraz on	1 0 0	36	—	—
30000	Par, s, St. Austell	0 0 0	13 1/2	1 1/2	1 1/2
45000	Parys Corporation, s, Anglessea	1 0 0	0	6d.	1d.
7500	Pateley Bridge i, Yorkshire	1 0 0	—	—	—
5000	Pedin-an-drea, t, Redruth	4 10 0	36	3/4	3/4
20000	Penegareg, i, Carmarthenshire	1 0 0	—	—	—
10000	Polverto, t, St. Agnes	0 3 0	2 1/2	2 1/2	2 1/2
10000	Polebrock, t, Crowan	0 13 9	2	1 1/2	2
10000	Port M. G. & S. W. & S. W.	0 15 0	—	—	—
15000	Pr. Patrick, s, i, (als. 12000 pf. 10 p. 6)	1 0 0	—	—	—
12000	Prince of Wales, s, c, t, Calstock	1 5 8	5s.	5s.	7s.
36000	Russell United, s, c, Tavistock	0 9 6	36	3/4	3/4
30000	Silver Hill, * Ollington	1 0 0	3 1/2	3 1/2	3 1/2
50000	Sinclair, s, i, bi, Whitford	1 0 0	36	—	—
40000	Sorridge, s, c, Horrabridge	1 0 0	—	—	—
50000	South Cardigan, s, c, St. Cleer	1 0 0	6s.	3/4	3/4
50000	South Cerrit, t, c, s, Agnes	0 10 0	15 1/2	1 1/2	1 1/2
42000	So. Devon Unit, s, c, Buckfast	1 0 0	36	3/4	3/4
5000	South Dolcoath, c, t, Illogan	0 19 0	36	3/4	3/4
6000	South Kitty, t, St. Agnes	0 10 0	36	3/4	3/4
5000	South Penstruthal, t, c, Gwennap	4 2 6	36	3/4	3/4
30000	So. Phoenix & Cardigan, t, c, Linkinh.	1 0 0	36	3/4	3/4
5000	South Tolarne, t, c, Camborne	5 11 6	36	3/4	3/4
2043	South Wheel Frates, t, Illogan	8 2 6	3 1/2	3 1/2	3 1/2
4500	South Wheel Frates, t, Illogan	11 4	3 1/2	3 1/2	3 1/2
3000	Standard, s, i, Llanst.	1 0 0	36	3/4	3/4
40000	Tamar, s, i, Bearslston	1 0 0	—	—	—
5000	Tolgulov Union, St. Day	—	1 1/2	1 1/2	1 1/2
12000	Trebartha Lemanne, t, Northill	0 11 0	—	—	—
6000	Tregembo, t, c, Cornwall	4 0 0	—	—	—
50000	Tregreontes and Old Polgooth Con.	1 0 0	36	3/4	3/4
100000	Tresavean, t, c, Gwennap	1 0 0	5s.	3/4	5/4
8000	Tresavean, t, c, St. Agnes	0 12 6	2 1/2	2 1/2	2 1/2
5000	Treuguan, t, c, Cardiganshire	0 10 0	1 1/2	1 1/2	1 1/2
30000	Van, s, i, Llanidloes	0 10 0	1 1/2	1 1/2	1 1/2
60000	Weardale, s, i, Northumbren. (44 share)	1 5 0	1 1/2	1 1/2	1 1/2
12000	West Assheton, i, Carnarvon	1 0 0	—	—	—
12000	West Cardigan, c, St. Cleer	0 13 8	4s.	1s.	2s.
30000	West Cornwall, s, c, Cornwall	1 0 0	1 1/2	1 1/2	1 1/2
12000	West Orebor, c, Tavistock	0 13 0	2s.	1s.	2s.
10240	West Devon Consols, c, Calstock	1 2 0	36	3/4	3/4
10000	West Godolphin, t, c, Bage	1 5	1 1/2	1 1/2	1 1/2
12000	West Gwennap, s, c, Cardigan	1 0 0	—	—	—
30000	West Llanbryn, s, c, Old	1 0 0	—	—	—
3000	West Mary Ann, i, Menheniot	1 18 0	36	3/4	3/4
20000	W. Pateley Bridge, i, Yorkshire	1 0 0	—	—	—
12000	West Phoenix, t, Linkinhorne	1 7 6	36	3/4	3/4
6000	West Polbreten, t, c, St. Agnes	0 11 0	36	3/4	3/4
6144	West Wheel Frances, t, Illogan	14 10 1	9 1/2	9 1/2	9 1/2
3000	West Wheel Foevor, t, Redruth	4 17 6	36	3/4	3/4
2400	West Wheel Seaton, c, Camborne	3 17 0	4	4	4
6000	West Wheel Seaton, c, Camborne	3 17 0	4	4	4
4000	Wheel Benny, t, c, Latchie	5 0 0	7 1/2	6 1/2	7 1/2
3000	Wheel Boys, t, Redruth	1 3 6	—	—	—
30000	Wheel Castle, s, c, St. Just	1 0 0	1	3/4	3/4
12000	Wheel Coates, t, St. Agnes	0 12 0	3 1/2	3 1/2	3 1/2
2585	W. Conf., & No. Tres., t, c, Gwennap	2 2 0	36	3/4	3/4
50000	Wheel Elizabeth, s, t, Cornwall	1 0 0	—	—	—
12288	Wheel Jane, t, Keal	3 11 0	3s.	2s.	3s.
12000	Wheel Jermol, c, t, Agnes	1 0 0	36	3/4	3/4
12000	Wheel Lusk, s, c, Ollington	0 3 8	3 1/2	3 1/2	3 1/2
12000	Wheel Metal and Flow, t, Breage	0 3 6	1	3/4	1
2000	Wheel Owies, t, St. Just	8 3 0	—	—	—
30000	Wh. Silver & Lantigos, s, s, Camelfd.	1 0 0	36	3/4	3/4
8000	Wheel Sisters, c, Lelant	4 11 5	—	—	—
4096	Wheel Uny, t, c, Redruth	47 7 0	36	3/4	3/4
21885	Wye Valley, i, Montgomery	1 0 0	—	—	—
60000	Yeoland Consols, s, t, Devonshire	0 12 6	—	—	—
4000	Ystwith, s, i, Cardigan	1 0 0	—	—	—

bi, blende; c, copper; g, gold; i, lead; s, silver; st, slate.
s-i, silver-lead; t, tin; z, zinc; i, iron; a, arsenic; d, diamond.
* Limited Liability Companies; † quoted on the Stock Exchange.

[have paid divid. nds.

FOREIGN DIVIDEND MINES.

FOREIGN DIVIDEND RATES.													
3600	Alamillos, J. Spain*	2	0	0	134	134	134	2	17	11	0	1	3..Mar. 1895
39000	Almada and Tirlito Consol., *s†	1	0	0	3/8	3/	5/	0	6	3	0	1	0..May 1876
30000	Australian, c. South Australia†	7	7	6	2	14	2	1	11	0	0	1	6..July 1894
15000	Birdseye Creek, g. California*	4	0	0	134	134	134	1	9	0	0	2	0..Dec. 1894
30000	Bratsberg, c. Norway†	2	0	0	34	34	34	0	3	4	0	1	4..Mar. 1894
30000	California, c. Colorado*	1	0	0	34	34	34	0	3	4	0	1	4..Mar. 1894
41000	Cape Copper Mining, *f. Bolivia	5	0	0	34	32	34	61	17	6	1	0	0..Mar. 1895
30000	Colorado United, c. Colorado*	5	0	0	134	134	134	1	14	6	1	0	0..May 1893
50000	Copapo, c. Chili† (24 shares)†	3	10	0	234	2	234	2	8	9	0	1	0..Mar. 1894
32000	El Callao, g. Venezuela (foreign)	40	0	0	70	65	70	36	15	0	0	16	0..Nov. 1894
30000	English & Australian, *† c. S. Aust.	2	10	0	—	—	—	3	8	9	0	1	0..Mar. 1894
3000	Eng.-Aus. g. Vict. * pref. (30000 o.)	1	0	0	—	—	—	0	3	8	0	3	8..Apr. 1892
25000	Fortuna, f. Spain*	2	0	0	34	34	34	9	17	1	0	2	10..Mar. 1895
7000	Frontino & Bolivia, g. New Gran.*†	2	0	0	34	6/	8/	3	12	0	0	1	0..Dec. 1893
40000	La Plata, s.-L. Leadville†	1	0	0	6/	4/	6/	0	8	5	0	0	74..Oct. 1892
15000	Linares, f. Spain*	3	0	0	434	334	334	10	18	0	0	0	0..Oct. 1892
40000	Massey Iron Ore, c. Spain	10	0	0	34	34	34	20	10	0	0	10	0..June 1892
40000	Mason, c. Portugal	10	0	0	34	34	34	4	3	0	0	8	0..May 1895
40000	Montana, c. U. S.	2	0	0	134	134	134	0	8	0	0	8	0..July 1894
12000	New Hoover Hill, g. North Carolina	0	10	0	7/	5/	7/	—	—	—	—	—	—
35000	Oxford, c. Nova Scotia (foreign)	0	4	0	34	34	34	0	1	34	0	14	Mar. 1894
8000	Quebrada Rail. Land. & Cop. Venezuela	10	0	0	34	34	34	5	per cent.	—	—	—	1892
30000	Panaleillo, c. Chili†	4	0	0	234	134	234	2	0	9	0	2	0..May 1893
30000	Pitangu, g. Brazil (in 5000 \$1 pd.)	0	15	0	34	34	34	0	1	0	0	1	0..Sept. 1890
1400	Pontgibaud, s.-L. France†	20	0	0	434	434	434	30	3	1	0	11	3..Dec. 1893
10000	Port Phillip, g. Clunes*† (24 shares)	1	0	0	34	34	34	14	2	0	0	10	Feb. 1891
30000	Rara Fortuna, *†, Argent. Republic	1	0	0	—	—	—	3	0	0	0	1	0..July 1892
30000	Rio Tinto, c. Portugal Bds., Huelva	5	0	0	94	94	94	15	5	per cent.	—	—	0..Nov. 1893
21000	Rio Tinto, s.-L. shares	10	0	0	94	94	94	4	16	0	0	16	0..May 1895
30000	Santa Barbara, *†, Argent. Republic	10	10	0	134	134	134	0	12	9	0	1	0..May 1892
120000	Schwab Gully, s.-L. Kimberley foreign	0	0	0	34	34	34	6	10	6	0	10	0..Jan. 1893
100000	Scottish-Australian Mining Co. *†	1	0	0	3	234	3	20	p. cent.	0	2	0	0..Oct. 1894
10000	— Ditto, New	0	10	0	134	134	134	20	p. cent.	0	1	0	0..Oct. 1894
12000	Sierra Buttes, g. California*	2	0	0	34	34	34	2	7	0	0	6	0..Oct. 1894
14000	— Ditto, Plumas Eureka	2	0	0	1	34	1	3	3	0	0	6	0..Oct. 1894
25000	St. John del Rey† (25 Stock and multiple deal in)	—	—	—	675	725	—	5	p. c.	for half-year, June	1892	—	—
190000	Tambracherry, g. Wynaad	1	0	0	34	34	34	0	6	0	0	6	Aug. 1892
63000	Tharsis, *c. s.-L. Spain (56730 shares issued)	2	8	0	54	54	54	0	6	0	0	6	0..Jan. 1895
30000	— Ditto, (24 shares)	5	0	0	34	34	34	6	0	0	0	5	0..Jan. 1895
30000	— Ditto	5	0	0	34	234	234	1	5	3	0	5	0..Jan. 1895
25000	Victoria* (London)	5	0	0	94	94	94	0	13	10	0	8	Feb. 1891
184221	United Mexican, *†, s.-L. Mexico	9	17	6	34	234	234	34	0	5	0	2	6..Nov. 1894
10000	Victorine (Nevada, U. S.) Deb. Bds.	1	0	0	—	—	—	0	4	6	0	2	6..Nov. 1894
10000	Western Andes, s.-L. Colombia	5	0	0	5	434	5	4	16	3	0	10	6..Aug. 1894
7100	W. Prussian (5500 pref. sh. £10 pd.)	10	0	0	—	—	—	4	2	0	0	0	8..Apr. 1891
18000	Yorke Pen., c. South Aust. Pref. t.	1	0	0	34	34	34	0	3	0	0	3	0..May 1893

4 Have made calls since last dividend was paid

NON-DIVIDEND FOREIGN MINES

	NO.	NAME	PRICE	QTY.	COS.	P.P.
90000	Akanokoo, * g., Gold Cst. (100000 lss.)	1	0	0	0	0
14889	Anglo-African, * d., Kimberley, f.....	10	0	0	1½	1½
12000	Arendal, c, Norway	4	0	0	0	0
90000	Asia Minor, * s-l, Lidjessy, Sivas	0	17	6	1½	0
90000	Bakia, * g., Transvaal	1	0	0	2½	2½
90000	* b, Lake Sup., (2000 & 4 paid)	5	0	0	0	0
10000	British Antarctic, * g., N. So. Wales	1	0	0	0	0
10000	Bueno Ventura, * g., (fy. pd)... ..	1	0	0	0	0
90000	Caliao Bio, * g., Venezuela	1	0	0	¾	¾
43500	Canadian, c, sui, * Canada?	4	0	0	1½	¾
90000	Chile, * g., Venezuela (New)?	1	0	0	4½	0
90000	Chontales, c, * g., Nicar.? (108749 iso) ..	1	0	0	1½	3½
90000	Colombian Hydraulic, c, Colombia	1	0	0	8½	1½
76000	Davala Moyer, * g., Wynand?	1	0	0	¾	¾
90000	Devana, * g., Wynand?	0	0	0	0	0
10000	Don Pedro Norte, cl, El Rey	1	0	0	2s.	3s.
11200	Eberhardt, * s, Nevada?	1	0	0	¾	¾
90000	Eureka, * s, Nevada	1	0	0	0	0
90000	Georgia, * g., United States	1	0	0	0	0
90000	Groat Coast, * g., Wassau	1	0	0	0	0
12000	Haid Hill, * g., North Carolina	1	0	0	0	0
50000	Hultsfat, * l, H. Orebro, Sweden .	5	0	0	0	0
90000	Ind. Glenrock, * g., Wyoming	1	0	0	¾	¾
90000	Iran Gate? cl, ch. Hungary	1	0	0	¾	¾
90000	I.T.L., * g., s, California?	1	0	0	1½	¾
90000	Javali, * g., Nicaragua?	2	0	0	0	0
90000	Kangas, * g., New Zealand	1	0	0	0	¾
90000	Koinorov, * g., Oranienburg	1	0	0	6	6½
90000	Kongaberg, * g., Norway(14)	0	0	0	0	0
90000	La Trinidad, * g., South Africa	5	0	0	5½	¾
90000	Lisbon-Berlyn, * g., South Africa	0	0	0	2½	3½
90000	London and California, * g!!	2	0	0	0	0
90000	Michipicoten, * nat, c, Quebec	1	0	0	0	0
90000	Moselle, * l, l, Germany	1	0	0	0	0
90000	Mosore, * g., India?	1	0	0	1½	1½
78000	New Callao, * g., Venezuela	1	0	0	4	5½
90000	New Enmore, * g., Venezuela	10	0	0	48	66.
90000	New Pototol, * g., Venezuela	1	0	0	¾	¾
90000	North Mexican, c, Mexico	1	0	0	0	0

HOME RAILWAYS.

ORDINARY SHARES AND STOCKS.		Closing quotation.	
Present	Ordily pd.	Last week.	Last night.
amount.	Stk. or stk.		
10,856,970 Caledonian	97	98½ 99
14,991	£20 Cornwall	55½	4½ 5½
375,000 Cornwall Mineral	11	9 11
2,642,000 Furness Consolidated	105	103 105
4,987,000 Glasgow & So. Western	90	89 89
12,128,547 Great Eastern	68	62½ 63
8,867,977 Great Northern	111	111 113
1,159,275 ditto "A"	98	100 101
1,159,275 ditto "B"	151	148 151
1,000,000 ditto Def. div. to	111	110 112
1,211,670 accure from Mar. 1, '85		
1,722,995 Great Western	131½	133½ 134
3,400,000	10 sh. Hull and Barnsley	4½	4½ 4½
15,392,995 Lancashire & Yorkshire	113½	114 115
3,156,300 Lon., Brigh., & S. Coast	115	113 115
2,171,850 ditto Preferred	138	136 138
2,171,850 ditto Deferred	90½	92½ 92½
11,123,051 Lon., Chas., & Dov. Ab.	154	155 156
1,479,327 Lon. & North Western	125	125 126
9,794,161 London & So. Western	125½	125 126
— Lon., Til., & Southend	147	148 151
5,633,836 Man., Shef., & Lincoln	69	69 71
— ditto Preferred	105	103 105
— ditto Deferred	33	34½ 34½
5,981,810 Metropolitan	105½	105 107
15,370 ditto Preferred	—	—
83,270 ditto Deferred	—	—
2,250,000 Metropolitan District	47½	48½ 49
26,428,078 Midland	131½	132½ 133½
4,625,869 North British	90½	90 91
2,812,333 North-Eastern Canal	150	152½ 152½
3,221,140 North Staffordshire	85½	84½ 85½
3,179,370 Rhymney	142	137 140
2,869,670 South-Eastern	137	137 142
2,869,670 ditto Preferred	140	138 140
2,869,670 ditto Deferred	88	90 90½
1,403,200 Taft Vale	280	257 262

IRON AND COAL COMPANIES

Sales.	Company.	Prod.	Price.
100	Abbot, John, and Co.	75 0	44 1/2 44 1/2
100	Ashbury Co. (L) (new)	90 0	30 31
3	Bagnall, John, and Sons (L)...	3 0	
10	Benhar Coal Co. (L).....	10 0	
10	Bilbao River and Cantabrian R. Co.	10 0	6 1/2 7 1/2
20	Bolckow, Vaughan, & Co. (L) A	12 0	8 1/2 8 1/2
50	Brown, Bailey, and Dixon (L)	40 0	
50	Brown, John, and Co. (L).....	75 0	62 1/2 63
20	Cannell and Co. (L).....	10 0	75 75 1/2
20	Cannock & Huntington Coal (L)	10 0	10 10 1/2 dis
10	Central Swedish Iron & Stl. (L)	10 0	
50	Chariton Iron Co. (L).....	50 0	
10	Chilling Iron Co. (L).....	10 0	1 1/2 1 1/2
10	Consent Iron Co. (L).....	7 10	17 19
1	Consent Spanish Ore (L).....	1 2	4 4 1/2
20	Darlington Iron Co. (L).....	18 10	23 25
23	De La Palle Coal (L).....	25 0	4 4 1/2
5	English Crown Spelt (L).....	25 0	1 1/2 2
5	Genl. Mining Ass. (L) (fus. pd.)	8 0	4 5
50	Knowles, Andrew, and Co. (L)	5 0	5 5 1/2
20	Llynvi and Tondri (L).....	20 0	2 2 1/2
10	Lydney & Wigpool Iron Ore (L)	9 12	1 1
10	Midland Iron Co. (L).....	5 0	
10	Monkland Iron & Coal Co. (L)	10 0	2 1/2 3
50	Nerady Iron Co. (L).....	50 0	37 40
23	Went-y-Glo & Blaidd (S. p. d.)	62 10	37 40
3	Nerudda Coal and Iron (L)...	9 0	1 1/2 1 1/2
10	Newport Abercarn Coal Co. (L)	10 0	8 9
35	Palmer's Shipbldg. & Iron (L)	35 0	2 1/2 2 1/2
100	Parkgate Iron Co. (L).....	67 0	6 1/2 6 1/2
20	Patent Nut and Bolt (L).....	14 0	28 28 1/2
50	Penryn and Camborne, B.	50 0	7 7 1/2
50	Pelsall Coal and Iron (L).....	25 0	7 8
5	Rhymney Iron Co. (L).....	5 0	1 1/2 1 1/2
16000	St. Helen's Coal & Clay Co. (L)	1 3	
10	Sandwell Park Colliery Co. (L)	10 0	
100	Shotts Iron Co. (L).....	130 0	35 40
25	Sheepbridge Iron and Coal (L)	22 0	4 1/2 5 1/2
50	Silkeston & Dods. Cl. & Iron (L)	45 0	
			12 15

FINANCIAL AND INVESTMENT.

<i>Issue.</i>	<i>Shares.</i>		<i>Pd.</i>	<i>Clos.</i>
49150	10	Aus. Mort. & Agency [L] Eng. Issue 2	...	24 3/4
20000	25	Australian Agricultural	...	137 1/2
100000	10	Aust. & New Zealand Mort. [L] 8hs	...	1 1/4
101560	80k	Do. 4% per cent. Deb. Stock 100	...	1 1/4
10000	25	Aust. Mort. & Finance [L] 5s	...	10 1/2
592000	80k	Do., do. 4 per cent. Deb. Stock 100	...	99 101
8412	1	Canada Company	...	83 86
26	25	Canada North West Land Co. [L] b	...	1 1/4
130000	1	Central Argentine Land [L] 1	...	1 1/4
77000	5	Colon. Inv. & Ag. of New Zealand [L] 1	...	1 1/4
10000	25	Foreign Land & Finance [L] 100	...	118 119
110875684k	10	Do. Deferred	...	103 117
200010	6	General Credit and Discount [L] 3/4	...	356 392
25000	10	Land Corporation of Canada [L] 3	...	3 1/4
1000	0 3/4	London & S. African Explor. [L] 3/4	...	6 1/2 7
36738	50	London Financial Association [L] 4 1/2	...	2 3
10000	10	Macbath Mort. & Invest. [L] 100	...	3 1/4
400000	80k	Scottish Austral. Invest. [L] 100	...	225 230
200000	80k	Do. 5 p. c. Guaranteed Pref. [L] 100	...	113 118
200000	80k	Do. 6 per cent. do. [L] 100	...	132 137
100000	10	S. Aust. Land Mort. & Agency [L] 2	...	356 394

INSURANCE COMPANIES.

<i>Tonnage, Shares.</i>		<i>Pl.</i>	<i>Clos.</i>	<i>pr.</i>
50000	100 Alliance British and Foreign	11	33	35
10000	100 Ditto, Marine	20	12	24
50000	20 British and Foreign Marine [L]	4	22½	22½
50000	50 Commercial Union	5	18	17
50000	50 Eagle	5	6	6½
5000	100 Globe Marine [L]	2	1½	1½
27500	100 Imperial Life	10	23	25
13453	100 Indemnity Marine	50	14	15
130000	100 Lion Fire [L]	1½	—	—
49026	20 T'pool & Lond. Globe (£1 annu.)	—	24	25
35852	100 London and Lancashire Fire	—	45	47
50000	25 London and Lancashire Fire	2½	44	46
50000	20 London and Provincial Marine [L]	2	3½	4½
40000	25 Marine [L]	4½	7½	28½
50000	10 Merchants' Marine [L]	2	1	1½
50000	10 Maritime [L]	2	3½	4½
100000	25 North British and Mercantile	8½	27½	28½
30000	100 Northern	10	40	40
50000	25 Ocean Marine	5	—	—
6722	— Phoenix	—	303	208
200000	10 Queen	1	2	2½
200000	100 Royal Passengers	33½	8	8½
200000	50 Rock Life	½	7½	7½
56000	10 Ben	2	5	5½
135000	20 Lancashire	2	4½	5½
4000	20 Standard Marine	—	—	—
100000	20 Thames and Mersey Marine [L]	3	11½	11½
40640	20 Union Marine, Liverpool [L]	3½	4½	5
50000	20 Universal Marine [L]	3	—	—

GAS COMPANIES.

Issue, Shares	Gas Companies	Pd.	Clas. pr.
5000	30. Bahia [L]	all...	24 25
510000	5 Bombay [L]	all...	6 ½ 7
100000	5 Ditto, New [L]	4...	5 5 ½
29700	5 ½ Brentford Consolidated	100...	212 217
14000	20 British Gaslight [L]	all...	253
50000	5 ½ Commercial Gaslight [L]	all...	253 258
50000	20 Continental Gas [L]	all...	38 39
20000	Do. do. New, 1885, 1872	14...	26 27
10000	20 Do. do. 7 per cent. Preference	all...	30 32
23400	10 European [L]	all...	216 222 ½
94850	5 ½ Gaslight and Coke, A. Ord.	100...	229 234
54200	5 ½ Do. 4 per cent. Deb. Stock	all...	176 180
50000	10 Hong Kong Gaslight [L]	all...	176 180
20000	5 ½ Imperial Continental	100...	305 209
12000	6 Malta & Mediterranean [L]	all...	4 ½ 4 ¾
100000	Do. Metrop. of Melbourne s.p. Deb.	all...	18 ½ 17 ½
25000	30 Monte Video [L]	all...	5 5 ½
10000	5 Ottoman [L]	all...	8 ½ 8 ¾
30000	5 Oriental [L]	all...	22 ½ 23 ½
57500	5 ½ Port of Spain [L]	all...	20 20 ½
50000	5 ½ South Metropolitan A.	100...	265 270
50000	5 ½ Ditto, ditto, B.	100...	224 229

MICHELLE LANFORD

MISCELLANEOUS.			
	Company.	Prod.	Price.
14	Anglo-American Brush	8 0 ...	1 1/2 2
15	Do. do.	10 0 ...	3 3/4
16	Lon. & Glas. Engin. & Iron Ship	25 0 ...	15 10
17	Moble's Explosives [L.]	10 0 ...	15 17
18	Swan United Electric	3 0 ...	K K
19	Tel. Con. & Maintenance [L.]	12 0 ...	25 3/4 36 1/2
20	United Asbestos	10 0 ...	
21	Young's Patent Light & M. Co.	8 0 ...	111/2 113/4

TELEGRAPH COMPANIES.

Shares.		Pd.	Clas. pr.
88 1/2	Anglo-American	100	27 3/4 28 1/4
10	Brazilian Submarine	10	11 1/4 11 1/4
10	Cuba	10	10 1/4 11 1/4
10	Direct Spanish	9	1 1/4 2
20	Direct United States Cable ..	20	8 1/4 9
10	Eastern	10	11 1/4 11 1/4
10	East, Exten. Austr. and China	10	12 1/2 12 3/4
10	German Union	10	9 1/4 9 3/4
10	Great Northern of Copenhagen	10	13 1/4 14
25	Indo-European	25	30 1/4 31 1/4
10	London Platino Brazilian	10	34 3/4 35
8	Bute's [L]	100	75 1/4 80
88 1/2	Submarine	100	11 1/4 12
	United States	5	0

	Company.	Paid
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10	Anglo-American Brush	8	0	...	1 1/2	2
10	Do.	10	0	...	3	3 1/2
10	Lon. & Glas. Engin. & Iron Ship	25	0	...	15	18
10	Webb's Explosives (L.)	10	0	...	15	17
10	Swan United Electric	3	0	...	4	3 1/2
12	Tel. Con. & Maintenance (L.)	12	0	...	25 1/2	26 1/2
10	United Asbestos	10	0	...		
10	Young's Paraffin Light & M. O.	8	0	...	11 1/2	11 1/2

MINING IN NEW MEXICO.

The Travelling Correspondent of the *San Francisco Mining and Scientific Press* gives the following interesting details of his observations in the Georgetown district of New Mexico:—Nearly 25 miles north of Silver City is the lively little camp of Georgetown. As a steady bullion-producer this district has few equals, as well as a like scarcity of superiors. The reaction of a recent boom has placed the camp on a solid business basis both in its mercantile and mine and milling interests. The town is orderly and prosperous; its inhabitants are cordial in their reception, and hospitable in their treatment of newcomers who propose to reside in or invest in the industries of the place. In addition to these commendable qualities they are honest and correct in their representations, a trait not often to be credited to a mining community. The town is prettily situated on the south side of a gently sloping hill; the mountain opposite raising more abruptly. On this mountain side are the principal mines of the district.

FORMATIONS AND ORE BODIES.—The mineral-bearing ground is what is known as a horizontal contact. The quartz and ore bodies occurring between lime and slate; the latter being the overhanging wall. The deposits are in chutes and pocket chambers occurring continuously in the lime near the slate. At times rich bodies of ore have been taken from the lime a distance of 25 ft. below the slate. Chloride, horn silver, lead, sulphurets, and carbonate of silver is the character of these deposits. Chloride and horn silver to the extent of 40 per cent., the balance a combination of the others. The blanket-like mineral streak runs in between the lime and slate at a dip of about 34°. The mineralisation of the lime and quartz continues with depth varying in richness, the ore bodies occurring at intervals that indicate a permanency. The ores are free milling, easy to concentrate, and when concentrated run very high.

THE MINES.—Commencing with the mines on which the most development has been done, we have the McGregor and the Commercial. The former is owned by Malcolm and Alexander McGregor, two brothers, who rank as pioneer miners of the camp. The Commercial is owned by Messrs. Smith and Tower, both residents of the district, and having a reputation as practical miners. A few Michigan people hold a small interest in the Commercial. These two properties lie side by side. The development on both has been thorough and extensive. The mineral belt covered by these mines is not only identical in character as well as similar in the grade of their ores. These two properties, in the hands of one management as practical and more venturesome than either of the present owners, would be the nucleus of a big and lasting mine.

THE MCGREGOR.—The past history of the mine would read like a romance. The struggles of two brothers in their progress from poverty to affluence would make an interesting tale. The property has been worked for 12 years, and during that time has produced nearly \$500,000. The brothers were compelled to sell stock in the mine for money with which to push development, and erect a mill for concentrating. Often during the time since the mine's discovery the two brothers consisted the entire force on the mine. The development has been conducted in a manner that is characteristic of the district. A more intricate network of tunnels and inclines would be difficult to imagine. Ore bodies of excellent grade have been passed through in many places in search of richer deposits that could be shipped without concentrating treatment. These and the many tons of low-grade ore on the dumps that can now be profitably treated by the concentrator, will add to the output for a long time to come, even if no development was continued. During the present month three large and wonderfully rich beds of ore have been exposed, and their extent exceeds anything that has ever been opened up in the camp.

THE COMMERCIAL.—The work done on this property shows not only a thorough knowledge of the peculiar formations, but a keen foresightedness for the future utilisation of every pound of ore that latter-day methods very successfully treat. The underground workings are conducted very much as the McGregor, only that the low-grade ore has been stored in tunnels and inclines and on dumps, hoisting only the high-grade and a portion of the low-grade; all waste dirt. Development has been pushed and the recent erection of modern labour-saving machinery has put the mine in the lead as a finely equipped property. A two-compartment incline has been put down on the slate hanging wall a distance of 350 feet. The main lower levels of the entire mine are being pushed for a connection with this incline. The ore stored below will be taken out, and things will then be in a shape to systematically and advantageously develop this already paying property. The development of a number of high-grade ore-bodies recently at the lowest levels of the incline shows that depth has not lessened the quantity or quality of the Commercial output.

ADJOINING PROPERTIES.—The Naiad Queen, and a number of other rich claims, adjoin, and are continuous on the mineral belt south of the McGregor and Commercial. These claims are owned by the Mimbres Mining Company of New York. The formations, ore deposits, manner of working, and extent of development, are similar to that of the McGregor and Commercial. The company are working their mines on the tribute system, compelling leases to treat the entire output at the stamp mill of the company on the Mimbres river, three miles below Georgetown. Any number of individual claims about the camp are pushing development, and the shipment of ore and bullion is increasing in size and value every week.

THE MOGOLLON MINES.—This rich and recently discovered district is in the heart of the Mogollon mountains, nearly 90 miles north-west of Silver City, and is in Socorro county. Silver City is the shipping point. The road, for a distance of nearly 80 miles, is an excellent one. Alma is the nearest valley town to the mines. From Alma the narrow road follows up Clear Creek canyon a distance of eight miles, in many places using the bed of the stream for the road. Nearing the camp the size of the canyon grows smaller and smaller. In a number of places blasting has been done to make the passage-way for wagons. The mountains tower nearly perpendicular on each side in fantastic shapes; the variegated colours in the fierce glow of a midday sun, or the shadowy, towering peaks that loom, apparently, into the very skies on a moonlight night, baffles description. The grandeur of Colorado's celebrated Royal Gorge pales before the sublimity and natural beauties of this out-of-the-way but wonderful pathway of Clear Creek's road to the valley of the San Francisco river.

THE CAMP OF COONEY.—For over a mile the cabins and rudely-constructed business houses of Cooney cling to the mountain's base almost on a level with the swiftly-dashing waters of the creek, excavation for the rear end of the house and piling for the front being the order of most of the buildings. As yet the camp is small, and, considering its age, remote location, and a rough following of gamblers and sporting fellows that exist in all new camps, the place is exceptionally orderly. Mitchell and Drew, two Arkansas boys, are the merchants of the place; they have no opposition, and are growing wealthy accordingly. The camp has a reputation for richness and prosperity beyond its due. Outside of a few stock companies property there is nothing to justify any great boom. There is no question as to its lasting and substantial qualities as a mining camp, for capital and enterprise combined outside of this place would be like hundreds of other good camps now lying idle for want of capital.

THE MINES.—The Silver Bar Mine, better known as the "Cooney," is the latest mine, so far as development and output is concerned. The mine was discovered by J. C. Cooney, a pioneer miner, who was killed by the Indians near the camp which now bears his name. His heirs, and a number of Iowa capitalists, now own the property. The mountains on both sides of the creek, at the point where the vein crosses, raise abruptly at an angle that is nearly perpendicular to a height of nearly 1800 ft. A 700-ft. tunnel on the vein from the creek level goes on in a regular vein between two firm and well-defined walls. Above this, and connected by a 285-ft. incline shaft, is a similar tunnel that goes into the hill an equal distance. Nearly on the summit of the mountain, over the breast of the lower tunnel, a 60-ft. shaft is down on ore. The following description of the extension of this mine will, owing to its lower location and superior

surface indications, give the reader a better idea of the mines of the district:—

THE SILVER BAR No. 2.—This mine is the northern extension of the Silver Bar or "Cooney." Although not so extensively developed it has every indication of proving a bigger bonanza than the Cooney. John A. Miller, of Silver City, New Mexico, and San Francisco capitalists own the mine. Californians could not have their interests entrusted to a more progressive and capable man than they have in general manager John A. Miller. The claim is 600 by 1200. The vein is so near a true fissure that it must be called a contact fissure running north-west and south-east, occurring between two well-defined walls, the footwall being a dioritic porphyry, and the hanging-wall a spathic porphyry. The vein at all places exposed shows ore from wall to wall. The pay streak varying from 3 to 12 ft. in width. The ore is a silver and copper-glance of the "peacock" variety.

DEVELOPMENT.—The croppings of the vein for a distance of 100 ft. or more have been removed across the face of the east end, and a prettier sight than the immense body of beautifully coloured peacock ore from 4 to 12 ft. wide, is seldom seen by miners. The vein has a 50 ft. shaft down on this ore from the surface. A tunnel from the bank of the creek has been run in on the east end of the vein, and at its breast a 30 ft. shaft is down below the tunnel on ore. A tunnel driven in from the side hill to tap the vein below the bottom of the 50 ft. shaft on the surface, has cut the vein and shows it to be nearly 12 ft. in width at this depth, which is about 75 ft. A number of open cuts have exposed ore the most of which is high grade. The croppings of the vein show plainly across the face of the claim its entire length.

THE ORES.—The following assays of the vein matter will properly illustrate the character and value of the ores:—

	Ounces silver.
Average of ore on dump	136
Oxidised copper ore	71
Black oxide of copper	245
Copper pyrites	50
Blue carbonate of copper	166
Average of dump on platform	190
Peacock copper	163
Grey copper and pyrites	110
Grey and yellow copper	70
Copper oxide and sulphurets	72
Copper pyrites in quartz	42

The foregoing does not include any of the numerous returns from the unusually high-grade ore of the mine, but represents the general run of that which goes to make up the bulk of the first-class or shipping grade of ore. An average of 50 odd assays, inclusive of everything from wall-rock, with no more than a trace, to ore carrying 1000 ozs., was 120 ozs. in silver.

MINING AND MILLING.—The extraction of ore from this mine is easily and cheaply accomplished. A concentrator with a capacity of 50 tons per day is being erected by J. B. White and Co., of San Francisco, under the supervision of B. O. Cutter. By this concentrator low-grade ores can be increased in value six times their worth on coming out of the mine. The concentrates when ready for shipment will run from 500 to 1000 ozs.; more probably will average the latter. President Miller expects to have the concentrator up and running about June 1, and after it once starts there is no question about its being supplied for years from the great vein of the Peacock. Shipments already made have resulted in excellent returns. The many ore dumps represent a large sum of money, and will be realised on very shortly. Owing to the narrowness of the canyon and the almost perpendicular incline of the mountain side much difficulty was experienced in making a place to pile the ore, causing almost a total suspension of work on this account. A large force of men are at work erecting the concentrator, on the completion of which the mine will be developed extensively, and by a management that knows its business.

OTHER MINES.—The Silver Bar No. 2, adjoining Miller's Silver Bar No. 1 on the north, and is owned by a St. Louis company. The development is superintended by Joe Sheridan, and consists of a cross-cut tunnel over 450 ft. in length near the middle of the claim, which intersects the vein 350 ft. below the surface, showing at point of intersection 7 ft. of low grade rock. Lateral drifts have been run on the vein which shows good indications of increase of value of ore. Immediately above the intersection of the tunnel a cut and shaft 35 ft. deep has been made, showing a vein 12 ft. wide, with 2 ft. of ore, which runs from 30 to 80 ozs. silver and \$60 to \$100 gold. Other tunnels and shafts show up in a like manner.

THE UNION OIL MILLS (Limited).—Capital 70,000l., in shares of 100l. The objects of this company are to adopt and carry into effect an agreement, dated May 16, 1885, made between Augustus Sillem, of first part, Messrs. Kranbler and Melville of the second part, and Thomas Dickson on behalf of the company, for the purchase of the business, &c., of Messrs. F. and J. Badart Frères, seed crushers and oil refiners, recently carried on at Cuckold's Point and Ordnance Wharf, Rotherhithe, together with the freehold and leasehold land, seed crushing, and oil mills, machinery, wharves, and buildings. Also to import, export, and deal in oils, oil-cake, seeds, and other materials. The subscribers (who take one share each) are—John L. Melville, 12, Angel-court, E.C.; Francis F. Simonds, 12, Angel-court, E.C.; John F. Melville, 12, Angel-court, E.C.; A. H. Simond, 12, Angel-court, E.C.; A. J. P. Simond, 12, Angel-court, E.C.; Daniel Baily, 2, Gray's Inn-road; James H. Ladbroke, 64, Lancaster-road, Upper Tooting Park, N.

COPPER ORES.

Sampled May 6, and sold at the Royal Hotel, Truro, May 21.

Mines.	Tons.	Price.	Mines.	Tons.	Price.
Devon Great Consols. 112	20	19	South Caradon	32	£11 9
ditto 108	1	2 6	ditto	25	3 6
ditto 104	1	2 6	Holmbush	107	1 0
ditto 103	1	4 0	ditto	104	1 0
ditto 100	1	4 0	ditto	2	4 10
ditto 90	1	5 0	Gunnislake (Clitters)	90	4 3
ditto 81	1	1 6	ditto	84	2 6
ditto 50	2	13 6	Bedford United	56	2 6
ditto 40	4	0 0	ditto	56	2 14 6
ditto 10	4	3 0	ditto	13	0 19 0
ditto 2	9	4 6	Glasgow Caradon	52	3 19 6
ditto 1	11	5 0	ditto	43	3 12 6
South Caradon	68	2 12 0	Emily Copper Mine	15	2 11 0
ditto	62	2 16 6	ditto	10	5 3 6
ditto	57	2 13 6	West Caradon	23	2 6 6
ditto	51	2 8 0	Phoenix	9	3 2 0
ditto	55	2 18 0	ditto	7	9 11 0
New West Caradon	13	£3 16 0			

TOTAL PRODUCE.

Devon Gt. Consols. 1	£1153 0 6	Glasgow Caradon 95	£352 11 6
South Caradon 355	1248 13 0	Emily Copper Mine 25	89 15 6
Holmbush 2 3	220 8 0	West Caradon 23	53 9 6
Gunnislake (Clit.) 174	581 8 0	Phoenix 18	92 17 0
Bedford United 132	309 17 0	New West Caradon 13	49 8 0

Average standard

Average price per ton

Quantity of ore

Amount of money

LAST SALE.—Average standard, £ 75 3 0 | Average produce

Standard of corresponding sale last month, £ 78 18 0 | Produce, 6%

COMPANIES BY WHOM THE ORES WERE PURCHASED.

Names.	Tons.	Amount.
Vivian and Sons	292½	£ 899 12 3
P. Grenfell and Sons	232½	368 17 6
Nevill, Druce, and Co.	349	582 4 6
Williams, Foster, and Co.	369	945 15 3
Elliot's Metal Company	224	497 15 0
C. Lambert and Co.	291	932 8 0
Total	1847	£ 4162 7 6

NO SALE on the 28th May.

Copper ores for sale on Thursday, June 4, at Tabb's Hotel, Redruth.—Mines and parcels.—Mellaneur 501—Violet Beacon 23—Wheal Cornford 20—Camborne Vein 15.—Total, 564 tons.

Registration of New Companies.

The following joint-stock companies have been duly registered:—

THE NEW SOUTH WALES LAND AND FINANCE CORPORATION (Limited).—Capital 500,000l., in shares of 5l. Has for its object the advancing money upon real and personal property, &c., of every description in the Australian colonies or elsewhere, and to manage stations, collect or receive rents, and to undertake every description of agency business in and with the said colonies and elsewhere. The subscribers (who take one share each) are—Samuel Wood, Castlebar, Ealing; Frederick W. Smith, 61, Wool Exchange, Coleman-street, E.C.; James A. Anderson, 29, Dawson-place, W., Lieutenant-colonel; Albert F. Benning, Devonshire Chambers, Bishopsgate-street, E.C.; Edmund First, 55, St. Mary Axe, E.C.; Leonard C. Brown, 7, Irene-road, Fulham; John H. Tyler, 42, West-square, St. Georges-road, S.E.

THE BULLION AND METAL REFINERY COMPANY (Limited).—Capital 10,000l., in shares of 100l. The objects of this company are to carry out and adopt an agreement dated 8th May, 1885, made between Walter Wood and Edward Easton of the one part, and John Mansie Brett, on behalf of the company, of the other part, for the acquisition of certain letters patent of an invention for separating compounds of metals and ores, and for precipitating, refining, or depositing the component parts, also to carry on the business of electric engineers, electrotypers, refiners, &c., and any other business connected with minerals and ores. The subscribers are—Joseph Findlater, 33, Wellington-street, Strand; J. W. Walters, 6, Gray's Inn-place. The subscribers are—John M. Brett, 19, Albert Mansions, Victoria-street; Alfred Cornish, 76, Albert-road, Dalston, Walter Wood 22, Chancery-lane; Edward Easton, 11, Delahay-street, W.; J. A. M. Cope, 9, Great George-street, W.

THE GENERAL PUBLIC WORKS AND ASSETS COMPANY (Limited).—Capital 100,000l., in shares of 10l. Has for its object to construct public and other works in the United Kingdom, or in any foreign country or colony or possession of the United Kingdom. To establish and carry on undertakings to which the construction of such public or other works shall be incidental, and to supply all kinds of plant, material, and rolling stock, &c. The present subscribers are—Horatio Brandon, 15, Essex-street, Strand, 7 shares; G. S. Brandon, Oakbrook, Hammersmith, 8 shares; D. Gledhill, 82, Bishopsgate-street, 15 shares; E. B. Merriman, Marlborough, Wilt, 15 shares; H. W. Cobb, Salisbury, Wilt, 15 shares; Thomas Steel, 5, East India Avenue, 1 share; Thomas G. Heskeith, Barnet, 15 shares.

THE LONDON AND CONTINENTAL STOCK EXCHANGE AND INVESTMENTS (Limited).—Capital 20,000l., in shares of 5l. Has for its object to buy, sell, and deal in stocks, shares, and debentures of every description, whether English, foreign, or continental, transact the business as brokers, act as general financial agents, and carry on the business as bankers, &c. The subscribers (who take one share each) are—George Magne, banker, 3, Rue Auber, Paris; Alex. T. Angus, merchant, 69, Holland-road, Kensington, W.; Peregrine T. Bingley, 9, Chesterton-road, North Kensington; H. M. Macture, underwriter, 39, Lombard-street; Joseph Gregory, 16, Union-court, Old Broad-street, E.C.; Charles William Du Rantean, engineer, 4, Halford-square, W.C.; Jesse Hall, 42, Camberwell-grove, S.E. Registered without Articles of Association.

THE CONGO LAND AND TRADING SYNDICATE (Limited).—Capital 5000l., in shares of 10l. Formed to purchase and acquire land or property in Africa or elsewhere, make and manufacture all articles which may conduce to the profits of the company, and carry on the business of planters or traders in products derived from land or otherwise, &c. The subscribers are—Francis Charles Wilks, African merchant, Midway Park, Middlesex; William Joseph Kemp, merchant, 87, Walbrook House, E.C.; John Lord, chartered accountant, 54, Springfield-road, Middlesex; Arthur Kingsbury, clerk, 218, New Kent-road, S.E.; William B. Dow, accountant, 145, Southwark Bridge-road, S.E.; Robert Cramp, accountant, 78, Montpelier-road, Peckham; George Holmes, civil engineer, 13, Sussex-villas, W. Registered without Articles of Association.

THE IRISH CHANNEL TUNNEL COMPANY (Limited).—Capital 20,000l., in shares of 20l. The objects of this company are to make borings on the coasts of Ireland and Scotland, and under sea between these coasts, and to construct an underground tunnel between Great Britain and Ireland, in order that the means of complete land communication may be afforded between the aforesaid countries; also to construct and work a railway through the above tunnel, and electric telegraphs and telephones. The subscribers (who take one share each) are—Edward A. Prentin, 16, Gloster-place, Portman-square; George H. Hopkinson, 3, Regent-street, S.W.; Charles C. Hopkinson, 3, Regent-street, S.W.; Harry W. Christmas, 22, Walbrook, E.C.; Caldwell Ashworth, 22, Abchurch-lane, E.C.; James Solomon, 17, Goswell-road; William Bellingham, 2, Edinboro Mansions, Victoria-street.

THE FIBRE AND PLANTING COMPANY OF SOUTHERN INDIA (Limited).—Capital 20,000l., in shares of 5l. Has for its object the cultivation, and preparing, and dealing with rees, hemp, and other fibre-producing plants, pepper, tea, cocoa, coffee, and tobacco, and to purchase, hire, or take on lease any lands or property for the purposes of the company, also to join with any other persons or companies in acquiring or constructing railways, tramways, mills, or machinery. The subscribers (who take one share each) are—F. Henderson, 66, Gloucester-street, S.W.; Lieut.-Colonel; J. H. Ankins, 141, Fenchurch-street, E.C.; J. V. Masgrove, Albert Buildings, Queen Victoria-street, E.C.; L. G. Grant, 141, Fenchurch-street; C. E. Collyer, 141, Fenchurch-street; Alexander Leslie, 9, Mincing-lane, E.C.; Howard Hunter, 46, Lower Belgrave-street, Eaton-square, Captain R.N.

THE RIBBLE IRONWORKS COMPANY (Limited).—Capital 10,000l., in 1l. shares. Has for its object the acquisition, by purchase, lease, or otherwise, of manufactories, buildings, lands, tenements, and premises now belonging to John Porritt Rothwell, of Lytham, in the county of Lancaster, held by him under certain lease dated July 12, 1882, and to acquire, by purchase or otherwise, the working plant, tools, implements, utensils, and stock-in-trade, to carry on the business of mechanical engineers, machine-makers, wood-turners, and iron-founders. Also the manufacture, buying, and selling of iron, brass, copper, or other mineral substances. The present subscribers are—John Porritt Rothwell, Sea View-terrace, Lytham, 10 shares; George Rothwell, Lytham, 10; Isaac Moore, Lytham, 10; John T. Leach, Rochdale, 10; R. Bibby, Rochdale, 10; Thomas James, Rochdale, 10; George Wilson, Rochdale, 2.

THE BROAD OAK ACCRINGTON MANUFACTURING COMPANY (Limited).—Capital 20,000l., in 10l. shares. Has for its object, to acquire by purchase or otherwise, the weaving mills, sheds, and premises situated in township of Accrington, in the county of Lancaster, and heretofore in the occupation of the Broad Oak Manufacturing Company (now in liquidation), and to purchase, lease, or otherwise acquire any land, buildings, machinery and plant necessary or expedient for carrying on and extending the business of said company. Also to erect mills, sheds, factories, cottages, or other premises, &c., for spinning, weaving of cottons and yarn in all its branches. The subscribers (who take one share each) are—Henry Stead, Ramsbottom, Lancaster; Lawrence Stead, Ramsbottom, Lancaster; John Hardcastle, Manchester; Thomas Hardcastle, Manchester; John K. Stead, Ramsbottom; Thomas Glaister, Mill House, Bolton; James M. Stead, Ramsbottom.

THE TROJES UNITED MINING AND SMELTING COMPANY (Limited).—Capital 450,000l., in shares of 10l. The object of this company is to purchase and undertake all or any part of the businesses, properties, assets, and liabilities of the following companies:—The Trojes Mining and Smelting Company, the Compania and Aviodora de Trojes Company, or either of them, on such terms and conditions, and subject to such stipulations as may be agreed upon. Also to establish and carry on the business of miners, smelters, refiners, and dealers in minerals, whether metallic or earthy, or any other business in the Republic of Mexico. The subscribers (who take one share each) are—Ferdinand Unna, 12, Lancaster Gate, S.W.; Robert Rymon, 25, Cadogan-square, S.W.; A. J. Macdonald, Milland, Sussex; J. G. Mounsey, Lawrence Pountney Hill, E.C.; F. G. Stewart Colonel, 14, St. James's-square; J. S. Sellen, 78, Hatten Garden.

Law Intelligence.

LANCASTER WAGON COMPANY (LIMITED) v. WARING BROTHERS.

This was a motion in a Divisional Court last week, on behalf of Messrs. Waring Brothers, to set aside an award made by Mr. Vaughan Williams, to whom the questions involved in the case had been referred, or to send it back to the arbitrator. It appeared that in February and March, 1883, two contracts were entered into between the plaintiffs and defendants, under which the Lancaster Wagon Company were to supply a large quantity of rolling stock for the Minas and Rio Railway, in Brazil, for which Messrs. Waring were the contractors. The plaintiff company were to manufacture and supply wagons, vans, and carriages, and the wheels and axles were to be supplied by Messrs. Waring. The rolling stock was to be constructed in accordance with drawings signed by the parties and with the specifications, and the work was to be performed to the full satisfaction, and subject to the supervision and approval of the engineer of the company. It was also provided that in each class of carriage a specimen should be completed, of which the engineer was to approve before the other carriages were proceeded with, and there were stipulations as to the time at which the contract should be completed. If the plaintiffs failed to deliver the rolling stock free on board within the specified time the arrangement was that the plaintiffs should pay the defendants 10s. a day for each vehicle not delivered by way of liquidated damages, and were also liable to make good any damage beyond that, the defendants being under stipulations as to time with the railway company. There was some delay in the completion of the contract and as against the plaintiffs' claim for the work done. The defendants set up a counter-claim alleging that the plaintiffs were liable for the liquidated damages. The plaintiffs, however, contended that the delay was caused in consequence of alterations being made in the construction of the carriages and wagons and extras ordered by the engineer of the railway company and the defendants. This, however, was denied by the defendants, who attributed the delay to the plaintiffs. There were other matters in dispute between the parties, the plaintiffs having a claim for extras and the defendants for excess freight, improper packing, &c. The arbitrator found that the defendants were indebted to the plaintiffs in the sum of 12,772l. 12s. 11d., and in the sum of 1100l. odd for extras. He also found that the defendants were not entitled to retain out of the price of the rolling stock any sum by way of liquidated damages, as a fresh contract as to time had been established by the alterations, but found that in respect of delay in delivery for which plaintiffs were responsible the defendants were entitled to 1300l. damages. Against this decision the defendants appealed.

Mr. C. Russell, Q.C., and Mr. Macrae appeared for the defendants, and the Solicitor General and Mr. Channell for the plaintiffs. Their lordships upheld the award of the arbitrator, and refused the motion, with costs.

GLASGOW COURT OF SESSION.—WEDNESDAY.

Before the Lord Justice CLERK, Lords YOUNG, CRAIGHILL, and RUTHERFORD CLARK.

THE MONKLAND IRON COMPANY, ETC., v. LORD ELPHINSTONE.

The pursuer (Lord Elphinstone) is heritable proprietor of the estate of Monkland, and he makes heavy claims upon the Monkland Iron and Coal Company—now in liquidation—and alternatively upon the liquidators personally. The company was incorporated in 1872 for the purpose of taking over the whole business and works of the Monkland Iron and Steel Company. A variety of leases which the latter company had entered into with the pursuer, or those representing him, had been assigned to the former company, and had been worked down to May, 1881, when its affairs becoming embarrassed, it was resolved to wind up. With this view Mr. William Mackinnon and Mr. Nathaniel Spens were appointed liquidators. Pursuer concluded for payment of 1630l. as the amount due by the company at the time they went into voluntary liquidation, and for various other sums due under each of the leases. He asked that the liquidators should be compelled to make provision for the whole debts due by the company; to set aside the whole surplus now in their hands to meet the amount now due and payable; and, in the event of their failure, to have them found personally liable for 38,500l. Pursuer averred that the liquidators had realised the assets of the company, and have paid a number of debts. The amount of surplus now remaining in their hands is about 8000l. This sum, he stated, would not be more than sufficient to satisfy the debts due, and, therefore, he maintained that the liquidators were bound to set aside the whole surplus to provide for these debts. Defendants pleaded that the Monkland Iron and Coal Company, having validly assigned its rights under the deeds, was not bound to implement the obligations, and that pursuer, not being a creditor of the company, the liquidators were not bound to pay or provide for the debts alleged to be due to him.

Lord LEX, by his interlocutor, gave decree in terms of the conclusions of the summons, leaving it to the liquidators to deal with the claims in terms of the Companies Act, 1862, with modified expenses, in respect that the petition for conclusion for payment of the 1630l. was given up only at the debate.

The defender reclaimed, and their Lordships of the Second Division to-day recalled the interlocutor of the Lord-Ordinary, and dismissed the action, with expenses.

The leading opinion was given by Lord YOUNG, who said that in respect that the first four contracts referred to in the action were assignable, and were well assigned, he was of the opinion that the action was not maintainable. So far as he could judge, the defendants did nothing during their possession under these contracts to put them in the position of debtors or obligants to the pursuers, their tenancy was lawfully terminated, and the rents during the period of their possession regularly paid. It was unnecessary to decide more in this case than that no debt or obligation by the defendants capable of being affirmed by judgment was established by the proof taken before Lord Rutherford Clark, or even by the averments in the record. Whether or not the pursuer might be able to state and support his claim in the liquidation was a matter the Court was not called upon to consider. His Lordship also preferred to leave the claim as to a fifth contract for future rents to be put in against the liquidation if so advised, as there was admittedly nothing due to the pursuer under this lease. He further found that as to the agreement as to a deposit of slag, his Lordship entertained the view that no debt under the agreement had been averred or proved in this action. A further agreement to pay 100l. per acre for ground un-restored at a specified date was clearly a penalty under which no more than the actual damage could be recovered. Some of the ground un-restored when the defendants' possession ceased has since been restored, and the whole might be restored.

Agents for Pursuer and Reclaimers—Mr. Mackintosh and Mr. Dundas. Agents—Dundas and Wilson, C.S. Agents for Defendants and Respondents—Hon. H. J. Moncrieff and Mr. Ure. Agents—Mackenzie, Innes, and Logan, W.S.

DEATH OF A CORNISH HERO.—Railway passengers in Cornwall who can carry their recollections back but a few years will be able to recall the thrill of pleasure and pride which animated them on hearing of the cool courage and presence of mind of an engine-driver of a passenger train which, on the way to Par from St. Austell, was in imminent danger of being run into by a runaway train from Par, when Mr. Westlake, the driver of the former train, understanding the critical position, and reversing the engine, tore back for St. Austell, a veritable life and death struggle ensuing, and terminating in the passenger train reaching St. Austell in safety. The thanksgiving of passengers, some of whom gave vent to their feelings in embracing the driver, is well known. Many of those will bear with regret of the decease of Mr. Westlake, which has occurred at Penzance from cancer of the stomach. Deceased was 62 years of age, and was in active employment down to the past six weeks.

Colonial Mining Notes.

VICTORIA.

There is a general tone of improvement prevailing the mining industry, both as regards the activity of market operations and the gradual increase in the output of gold and the dividends therefrom.

SANDHURST.—The results of the operations during the month of March were as follows:—Tons of quartz crushed, 27,727, yielding 17,057 ozs. of gold; calls made by 20 companies, 7773l.; dividends paid in 16 companies, 31,870l. 10s. 8d.

At the formal termination of the sub-tenure of the Victoria Gold Mines Company it transpired that during the 15 years Mr. Cook had been manager 127 dividends had been paid, amounting to 100,000l.

DIVIDENDS for the week ending April 4:—			
Company.	Per share.	No. of shares.	Amount.
Belmont and Saxby ..	0s. 6d. ..	30,000 ..	£ 750 0 0
Garden Gully United ..	1 0 ..	33,517 ..	1,875 17 0
Garfield ..	0 3 ..	30,000 ..	375 0 0
Hercules ..	0 6 ..	30,000 ..	750 0 0
Lady Barkly ..	0 6 ..	24,000 ..	600 0 0
New Chum and Victoria.	1 6 ..	25,000 ..	1,875 0 0
North Old Chum ..	1 6 ..	27,000 ..	2,025 0 0
St. Mungo ..	0 6 ..	24,000 ..	600 0 0
Specimen Hill United ..	0 6 ..	40,000 ..	1,000 0 0
South St. Mungo ..	1 0 ..	30,000 ..	1,500 0 0
United Devonshire ..	3 6 ..	28,000 ..	4,900 0 0
Virginia ..	0 6 ..	24,000 ..	600 0 0
Total ..			£16,560 17 0

YIELDS of gold for the month ending April 4:—Sandhurst, gold and amalgam, 7714 ozs. 8 dwts.; Ballarat, gold, 2391 ozs.; Creswick, gold, 2255 ozs.; miscellaneous, 3210 ozs. 10 dwts.

MALDON.—South Exhibition washed off 40 tons, for a yield of 48 ozs. 4 dwts. 12 grs. of gold, and the further crushing shows well on plates.

SOME good stone getting in the Tarrengower Mine, a fine metallic quartz showing gold freely.

CLUNES.—Port Phillip Company's Mine showing decided improvement; the average return for the month shows 6 dwts. 19 grs., 1250 tons yielding 428 ozs. of gold. New North Clunes maintains its satisfactory character, and late results will, it is expected, be exceeded in the next fortnight's crushings. The company declared a dividend of 10s. per share.

BALLARAT.—Band of Hope and Albion Consols, April 4: Yield for the week from 350 tons of stone, 274 ozs. 10 dwts. Struck lode in the 1000 ft., or No. 11 level, at 122 ft. from shaft; stone about 2 ft. 6 in. thick, showing gold throughout—same character as No. 10 level.

BUNINYONG ESTATE.—Shaft 88 ft. below 550 ft. level; yield of gold for the week, 120 ozs. 5 dwts.

WALHALLA, Gipp's Land.—Long Tunnel Company at its monthly meeting declared a dividend of 1l. 10s. per (2400th) share. During the month 1971 tons of quartz were crushed, yielding 2186 ozs. 10 dwts. of gold.

LONG TUNNEL EXTENDED.—Nos. 4 and 5 Levels: The stopes are looking well, and continue to yield good stone for crushing. At No. 8 level the reef is 3 ft. thick, carrying fair gold. Battery crushing full time from all the stopes.

CRESWICK.—Lone Hand: Mine looking well. Yield for the week, 704 ozs. 8 dwts. of gold.

MADAME BERRY.—Bottom level now in 1845 ft. Mine looking well. Yield of gold for the week, 631 ozs. 6 dwts.

SANDHURST.—Victory and Pandora: The plat at 1960 ft. will be soon completed. The rise on the west leg is now 23 ft. above back of 1860 ft. cross-cut. The stone has widened to 4 ft. 3 in., and continues to show fair gold.

BALLARAT.—The quarterly returns from the mines for the Central district were issued on Saturday, April 11th. The estimated yield of gold for March is 11,188 ozs. from quartz, and 900 ozs. from alluvial; total 12,088 ozs., against 15,243 ozs., for the previous quarter. The quartz crushing in the March quarter was 24,501 tons, and for the December one 30,426 tons. The dividends for the March quarter were 15,890l., and for the December quarter, 11,539l.

SANDHURST.—The quarter ending 31st March disclosed the following results from gold mining operations. Quartz crushed 84,634 tons; gold reported by local banks, 51,382 ozs.; equal, say, 205,528l.; calls made, 31,107l.; and dividends paid 82,064l. To illustrate the remarkable regularity of the yields of gold in Sandhurst for the last three years, the first quarter in each year gives the following results:—1883, 51,098 ozs.; 1884, 51,098 ozs.; and 1885, 51,332 ozs.

MALDON.—The South Exhibition washed off 135 tons for a yield of 203 ozs. 6 dwts. of gold. A dividend of 2s. per share declared.

The Oswald's, Parkins Reef Mine (which was endeavoured to be placed on this market) continues to yield well. The Golden lode has been opened out 160 ft. along the line of reef to a depth of 119 ft., good gold continuing at both ends and bottom. The reef is 6 ft. wide, and the whole has been crushed. The last 214 tons yielded 340 ozs. of gold, and 340 tons more at the mills.

CLUNES.—The New North Clunes Company during the fortnight crushed 356 tons of quartz for a return of 262 ozs. of gold.

CRESWICK.—The yields of gold from the alluvial mines for the week ending April 11th was 1943 ozs. 7 dwts. The Lone Hand yielding 567 ozs. 10 dwts., and the Madame Berry 616 ozs. 15 dwts.

QUEENSLAND.

A PLUMBAGO MINE.—In the vicinity of Tiaro, near the line of Maryborough and Gympie Railway, has been discovered a splendid lode of plumbago. It is said the lode will average 8 fms. in width, nearly solid, having only a few narrow veins of rotten claystone intermixed therewith. The underlie of the lode is about 45 deg., running about one point and a-half to the east of north. The part of the lode laid open would turn out (say) 1000 marketable tons of this commodity, and owing to the rise of the hill on the course of the lode would increase the backs at least 1 fm. on an average for every fathom driven for from 300 ft. to 400 ft. from the face. The foundries in Queensland at the lowest estimate use 5000l. worth

of plumbago per year for moulding alone. Antimony, copper, and coal are also found in abundance in the neighbourhood.

PALMER RIVER, Maytown.—The event of the week has been the successful crushing of the Comet Company 90 tons of stone, yielding 250 ozs. of gold, or about 2½ ozs. gold per ton.

GYMPIE.—Considerable energy is being infused in development of the progressive mines along the surveyed lines of the principal reefs, some of the operations involving a large outlay for machinery.

DURING the month of March the dividends declared amounted to 8960l. from the following companies:—No. 1 North Phoenix two dividends aggregating 5s. 6d. per share, equal to 5500l.; North Lady Mary, 1s. 6d. per share, 1800l.; Nos. 3 and 4 Glamire, 3d. per share, 600l.; Nicholls's Leasehold, 6d. per share, 600l.; Wilmot Extended, 3d. per share, 450l. The crushings completed during the week comprise the following lots of stone:—Wilmot Extended Company, 258 tons of stone, yielding 330 ozs. of gold; the North Glamire, 117 tons of stone, yielding 165 ozs. of gold; Nos. 3 and 4 North Glamire, 1129 tons of stone, yielding 1145 ozs. of gold; the Golden Crown, 190 tons of stone, yielding 241 ozs. 10 dwts. of gold.

ETHEDRIDGE.—The great want of this district is more crushing machinery; the results from the several mines during February were 637 tons of stone, yielding 924 ozs. 15 dwts. of gold, or nearly 1½ oz. per ton.

CHARTERS TOWERS.—The Day Dawn P. C. Company have crushed for the fortnight 738 tons, yielding 1555 ozs. of gold. A dividend of 3s. per share has been declared.

ROCKHAMPTON.—The returns from the Customs to 31st March show the export of gold from this port for the quarter to have been 6647 ozs., valued at 25,332l.

HERBERTON.—The four mills are in good work crushing, and the smelting operations in full force at Irvinebank. At Newiston (Silver Camp) good work is being done.

NEW SOUTH WALES.

A PLENTIFUL fall of rain will enable mining operations to be pushed on vigorously, and then there will be no difficulty now of finding water in the Barrier ranges.

At the Day Dawn Silver Mine 100 men are employed, and the output last week was about 90 tons, making 1200 to 1500 tons now stacked on the mine awaiting the erection of smelter.

ORE is being raised and stacked from the Outward Bound, Homeward Bound, Comstock, Exhibition, Bonanza, and Ophir Silver-Lead Mines. Good ore is being raised from the Maybell Silver Mine, and another consignment ready for shipment.

A PLANT of smelting works is being erected and expected to be ready in about ten weeks.

BRAIDWOOD.—Rich and important discoveries of gold have been found at Settlers' Flat, on the Little river; 18 tons of quartz gave 39 ozs. of gold of high quality, worth 3l. 19s. 6d. per ounce.

THE coal seams discovered in the Milton and Ulladulla districts, near Jervis Bay, has been reported upon by Mr. C. S. Wilkinson, geological surveyor. The site is near the sources of the Clyde river, where the junction of the water from several peat-bog swamps has eroded a precipitous ravine about 600 ft. deep, at the bottom of which the coal seams crop out.

SILVER ore has been discovered on the Tweed river, which, it is said, will rival the famed Sunny Corner for richness. Prospecting areas have been applied for.

NUNDLE.—A crushing of 70 tons of stone from the John Bull claim, Bowling Alley Point, has yielded the very satisfactory yield of 4 ozs. to the ton.

THE Secretary of Mines has received a report from Mr. Wilkinson respecting an alleged discovery by Mr. John Grives of the occurrence of shoots of minerals in lodes. Mr. Grives states from his personal observations on the Governor Bourke Reef and the Nuggetty Reef, at Chambers Creek, and also from information obtained from miners regarding reefs in various parts of the colony, he has discovered that gold occurs in quartz reefs in shoots which are 8 ft. across, and dip northerly at the rate of about 9 in. in 1 ft. in reefs which strike north and south, and in reefs striking east and west he believes that the auriferous shoots will dip at the same rate towards the east. And from his experience in working a copper lode in South America, he believes that the same rule regarding shoots of ore applies to copper, silver, and tin lodes. Mr. Grives' observations are to some extent in accordance with those made years ago by Professor Ulrich, Mr. J. Cosmo Newbery, Mr. Nicholas, and others, in reference to occurrence of gold in shoots in the reefs in Victoria.

SOUTH AUSTRALIA.

THE Gumeracha gold fields continue to yield good returns; between 500 and 600 miners are in the field, and the bulk getting gold. Half a bag of stuff from one shaft gave 1½ oz. of gold, including a nugget nearly an ounce.

At Watts' Gully was picked up a 5 oz. nugget of gold from a heap of wash-dirt, and a 5 lb. specimen nugget was found a few days ago estimated to contain 2 lbs. of pure gold. A number of miners are stacking their wash-dirt.

A CORRESPONDENT writing from Pretoria, April 27, says:—The Victoria Gold Mining Company, adjoining Moodie's on Government ground, has led off by paying a dividend of 10 per cent. on its capital for its first two months' crushing. There are numerous other small companies in the locality that will very soon show like results when crushing is carried on. People out here and in England do not seem to understand that however rich quartz is, it must await crushing to get gold. They have an idea that if a thing is rich it ought to return by simply using fingers and nails to take it out, and get quite despondent through having to wait. It is almost certain that the smaller concerns are outstripping the larger ones. Very soon one favourite small concern will return a great part of its capital on first quarter's work. Most of the large companies will take longer time to show profits. Last English papers brought news of the formation of two new companies, with huge capitals, for mining in this part. It is a great pity to see so much money being invested in single concerns. Up to the present no large company has done any good. The first companies started in South Africa for mining at capitals exceeding 100,000l. was at Kimberley, and in almost every case the ground was thoroughly tested and investors knew exact yield from former results of mining extending over several years. The report that Lisbon-Berlyn had sent seven bars of gold home is not confirmed. Crushing will commence near here (Barnard's Tweefontein) in a short time; results anticipated to be very good; 500 tons ready for crushing, and assays show some ounces to the ton.

American Mining Notes.

(FROM OUR OWN CORRESPONDENT.)

NEW YORK, MAY 18.

Last week letters were received in this city from firms standing very high in metal circles in England announcing that the Spanish pyrites companies, the Calumet and Hecla and the Anaconda, had at a conference agreed to restrict copper production. This *canard*, coming as it did from such good sources, received respectful consideration by not a few, and I may add that some of the smaller producers were quite eager to believe it, because it would give them advantages without imposing any burden on them. Your correspondent, knowing how keenly the readers of the *Mining Journal* are on the alert for facts that might help to pull this metal out of the mire, investigated the matter, and found his expectations that there was nothing in it fully realised. One of the officers of the Calumet and Hecla Company assured him that that organisation had reached the conviction that its interests precluded its entering into any pool, combination, or agreement on either side of the Atlantic. You are doubtless aware of the fact that the famous "copper pool" of the Lake producers in this country has ceased to exist. When the Quincy cut loose last year, and could not be forced into obedience, the rope of sand uniting the companies was severed, and now the last vestige of a binding organisation has been destroyed. Little attention has been paid to that fact here, though it has been made the pretext of some "bear" attacks on copper abroad. The Calumet and Hecla Company is of such overshadowing importance that its movements will continue to shape affairs in this country and influence them in Europe as much as it has done since the Quincy became independent. It has nearly completed all the necessary outlays for plant and equipment, and will go right along making money. It has thus far in the first four months produced about 18,750,000 lbs. of ingot copper against 11,500,000 during the same period last year. Taking into account the fact that it made a comparatively light product early in 1884, this does not look as though it would do more than 50,000,000 lbs. this year as against 40,000,000 last year. While on the subject of copper I may state that the Anaconda works, which were so sharply attacked as horrible botchwork from an engineering point of view only six months since, have been very much improved. I am informed that the plant has been brought to a very good working condition.

The Harvey Peak Mining Company, the leading and, thus far, practically the only concern of any account in the Black Hills, Dakota, tin district, has begun to order machinery. They have come to the conclusion that they know now that they have got to crush their rock, and accordingly they have contracted for Gate's crushers and Cornish rolls sufficient in number to treat 200 tons per day. What particular method of dressing the crushed ore they will want they have not yet settled upon, nor have they bought or ordered the power in the shafting and pulleys. This proceeding is certainly not calculated to inspire the unprejudiced observer very favourably. It is difficult to understand how they are going to escape a world of hitches and troubles before they get fairly to work. The concern appears to us to have suffered from a superabundance of counsels, and too little faith in any of them. The story is related in engineering circles that one of the leading spirits—an old but opinionated brewer—insisted upon having the rolls speeded at 500 revolutions a minute, because he had seen grain rollers running successfully at that velocity. A successful mining engineer must have powers of persuasion which would make him a dangerous rival for the diplomats engaged in the Anglo-Russian imbroglio. Some months from now the Harvey Peak Company will have a 200-ton crushing plant, and our newspapers will be filled with elaborate and enthusiastic tales of the enormous flood of tin poured upon an unoffending people, and the deathknell of the Cornish miners will be promptly and loudly sounded. Perhaps then the fears of a manufacturer of metal goods expressed to me years ago will be realised. That gentleman devoutly hoped that a tin mine would be never discovered in this country, because, he said, they would promptly clap a duty on the metal to protect an "infant" industry. Let it be supposed, for argument sake that the Harvey Peak Company does crush 200 tons per day of rock yielding 25 per cent. of the metal, which is a liberal estimate. That would be 500 tons per annum. We are now consuming at the rate of 8000 to 9000 tons per annum. If, therefore, you are told months hence that the "pauper labour" tin of Cornwall, the Straits, and Malacca are to be driven out of the market, and the gamblers in the metal want to send it whirling downward, urge the holders of tin shares not to lose confidence. We open our mines with startling rapidity, but it will take many years before any such contingencies are likely to arise. On the other hand, it will not do to sweep the whole question of tin production in this country aside with scorn. There is tin in the Black Hills, and from the most trustworthy accounts I have heard the showing is really a good one. Our mineralogists and mining engineers are perfectly able to distinguish tinstone from tantalite, and the statement implying the contrary made at the Dolcoath meeting some months ago was entirely uncalled for. It is true that some very wild stories found their way into print in this country in regard to the Black Hills deposits. A "Professor" Bailey, who seems blissfully ignorant of what he talks about, was responsible for much of these extravagant interviews. As for the reports of the existence of tin in other localities in paying quantities I have little faith in them. A very careful journal, the *Virginian*, which has striven earnestly to direct attention to the mineral resources of Virginia and West Virginia, referred an account of a new discovery at Glenwood, W. Va., to a competent authority, and got the following reply:—"I have no faith in the existence of tin in paying quantities anywhere in W. Va., hence I regard the 'tin excitement' in some of our counties as gotten up by a ring for mercenary motives. I think it possible that a 'confidence game' is being played upon some of our farmers by a rascal who is in collusion with some pretended chemist in one of the cities. I am instigating enquiries to find out this chemist's address who has discovered so much 'tin' in our State, and when I run him down I shall write you an article for publication on these bogus analyses and ore discoveries."

Messrs. MATHEWS and WERN (ore and bullion brokers, Denver, Colorado) write on May 13:—Copper still presents an interesting theatre of action, and the spasmodic efforts toward improvement, coupled with sudden reactions, indicate but too plainly that the wires are being pulled by very strong hands in opposition to the force of a legitimate market. At New York the natural trend is asserting itself, and Lake is strong at \$11.60 bid, \$11.70 asked, with Orford and Baltimore at 10½ to 11½ under sales that will aggregate 500,000 lbs. An announcement comes from the Newark works that a new brand made by the electric process will soon make its appearance. The Copper Queen and Old Dominion Companies are reported to have shut down their mines. At London on the 2nd Chili bars stood at 43½, and by successive steps of about 10s. per diem the price waltzed up to 45½ by the 7th, which proved too great an excite-

ment, and it promptly fell away to 44½ 10s., with every promise that it would be jumped on still further by the "bears." Best selected has drawn down to a point rather nearer its usual and proper relative difference, and is quoted at 48½ 12s. 6d. Lead was apparently on the ragged edge of an advance when a halt was called by the sudden appearance of the Richmond Company in the field. Its 8000 tons of reserve lead have been a silent menace on the market for three years back; for although none of it has been offered for sale for more than 20 months past, the consumers have been a steady interrogation point as to when the stock would be sold, and that question has been followed with "how much of it?" This last affair appears to have been a genuine flash in the pan. A bid at \$3.60 was made, but the sellers would not accept it, and the matter stands just where it was before. Meanwhile the buyers have anxiously awaited developments and have done no business at all beyond actual requirements, say 300 tons at New York at \$3.70, and 800 at St. Louis and Chicago at \$3.50.

ROYALTIES ON COAL.

The present depressed state of the coal trade and the low prices which have prevailed, rendering a reduction of miners' wages an urgent necessity, are now drawing attention to the royalties being paid by the mineowners. These have greatly increased during the last few years, and that to an extent not warranted by the price at which coal has been sold. The extraordinary state of things which prevailed in 1872 and 1873, when the price of coal reached an almost fabulous amount, and when capitalists, large and small, rushed off wildly to invest in coal mines, in the belief that the then state of the markets would continue, led to a great increase in the royalties for coal. The competition for coal fields indeed was so intense that in many instances the royalties were trebled. Such was the result of the great and unexpected prosperity which prevailed in the coal trade at the period named, but now that the selling price is fully as low as what it was for years before the "coal famine" took place the increased royalties have to be paid. Owners who are now working under new leases are much better off than those who have leases only dating back some 12 or 13 years, whilst allowances formerly made by lessors are not even alluded to in the recent leases. This was forcibly pointed out by Mr. PEASE, M.P., in his evidence before the Select Committee on Coal. He said that under the new leases rent had to be paid for the coal which was used at a colliery, whilst under the old leases there was a large allowance often granted—he had known it as large as 12 or 14 per cent. given to a colliery for the consumption of the colliery—that is to say, coal used under the boilers. The royalties at some places have consequently risen 8 per cent. by not allowing coal as stated. The same gentleman also said that in the exceptional period to which we have alluded, the royalties had increased from 4½d. to 1s. per ton, which latter took place in 1873. But, as we have previously pointed out, the price of coal is now fully as low as what it was when some leases were granted at from 4½d. to 7d. per ton, so that those who have to pay, say, 1s. per ton at the present time must have a very hard time of it. In the West Riding of Yorkshire for the Thick coal the average price before the "ugly rush" took place was 300s. an acre, or about 7d. a ton, but in 1873 offers of 400s. an acre were made. For the Silkstone seam there are now leases in force made in 1873 that stand at 250s. an acre, and in some instances perhaps rather more, and this would be equal to at least 1s. per ton. This may not appear to be so very much, but then it should be recollected that in working a seam of coal there is a good deal of small stuff made which has not often realised the royalty paid for it, let alone the cost of getting and raising to the bank. It is, therefore, not to be wondered at that owners of coal mines, with the prices which they are now obliged to sell at, are unable to make even a small profit on the capital that they have invested, and have looked to a reduction of the miners' wages as the only means of relief. They know they have no legal claim for assistance from their lessors; but the latter, who run no risks, and have no capital at stake, might well under existing circumstances play the generous part, and be content with less than the pound of flesh they are legally entitled to. With regard to some of them, it may be said that they did not receive any increased benefit when the price of coal was exceptionally high, and mineowners' profits very large. But even with regard to this there is every reason to believe that they shared in the prosperity, owing to the greatly increased production of the mines. With respect to the leases granted in 1872 and 1873, and it may be the year following, things are different, for the royalty is now the same when coal was 6s. a ton as what it was when the price was 20s., and those circumstances have to compete in the same markets with those who are working under much older leases or those more recently made. In one Union we are told the royalty rents varied from 4d. per ton to 1s. 6d. per ton, so that there is not much chance of the heavier taxed owners competing with those who are so favourably off in comparison. The question as to the right of charging royalty rents for minerals is not one that is likely to be raised, at least, for some considerable time to come, if, indeed, it is raised at all, but the lessors in times of depression would do well to aid their tenants when struggling against adverse circumstances, for which they are in no way responsible. By reducing the royalty of a mine it might be kept going, instead of being allowed to stand idle, to the loss of both lessor and lessee. There are now mines, coal and metallurgical, standing because the royalty will not admit of their being worked, to the serious loss of the working miners as well as owners. In the West Riding of Yorkshire many thousands of miners are now on strike against a reduction of wages, while the employers find they are far higher than they can pay. The 10 per cent. reduction asked for, in the majority of cases, does not represent more than from 2d. to 3d. per ton for the miner, and this would, if given in any shape, cause work to be resumed at once. Owing to the strike, the lessors of the coal cannot have lost, up to the present time, less than 75,000s., and this might have been to a considerable extent averted by the owners of minerals offering to reduce their royalties, and so to some extent sharing in the losses occasioned by the general depression of trade. There is certainly no legal obligation for them to do so; but the generous landlord, willing to make some little sacrifice for keeping up an industry in which he has a large stake, would be no loser in the long run, and he would be receiving some rent whilst less liberal royalty owners would be receiving little or nothing. Owners of minerals and metals would therefore be acting in their own interest were they to contribute some little towards lightening the burden of those who hold leases from them in seasons of depression, and when they are unable to work their mines at a profit.

GAS SHARES.—The principal business in these shares, according to this evening's report of Messrs. W. L. WERN and Co., of the Stock Exchange and Finch-lane, has been:—Bahia (Limited) Ordinary 25½ to 25¾; British Gas Light (Limited), 41¼; Buenos Ayres New 13¼; ditto Six per Cent., 105¼; Commercial Consolidated, 258; Continental Union (Limited), Original, 38½ to 39; ditto New, 28½ to 28¾; ditto Seven per Cent. Preference, 31 to 32; Gas Light and Coke, A, 233 to 239; ditto C, D, E, 242; ditto H, 151 to 154; Imperial Continental, 268½ to 269; Malta and Mediterranean Ordinary, 47½ to 48; Metropolitan of Melbourne Five per Cent., 105¼; Oriental (Limited), 4¾; Paris (Limited), 4; San Paolo (Limited), 14¾; South Metropolitan, B, 224 to 225½. Gas stocks steady.

WATSON BROTHERS MINING CIRCULAR.

WATSON BROTHERS,
MINEOWNERS, STOCK AND SHARE DEALERS, &c.
1, ST MICHAEL'S ALLEY, CORNHILL, LONDON.

In the year 1845, just 40 years ago, copper ore was discovered in Australia, and in writing a review of the mining operations of that year we referred to the discovery as one that merited the serious attention of those engaged in copper mining in England. Just at that time parcels of rich ore, worth 20s. to 30s. per ton, were being sent over, and numbers of new mining companies were started to work Australian mines, but few of them ever paid much to the English investor. Copper by these and other discoveries has been brought down to its present unremunerative price.

The year 1845 was also described by us as one of the most remarkable in mining annals, through the discovery of one of the richest copper mine ever discovered in England, also for the great extent of share transactions, and the rage for new projects set afloat; and, in reference to the latter, we made a few remarks that we shall refer to presently.

The discovery of Devon Great Consols, the mine to which we have referred, was made in November, 1844, and in 1845—that is, in its first year—it paid a profit to the shareholders of 55,296s., or 54s. per share on 5s. paid up. This gave rise to the excitement that followed, and the numberless new companies that sprung into life, upon which our comments were based, and we wound up by saying—"In mining and things connected with mining both in London and Cornwall so many things clash—the merchants with the adventurers, the 'bulls' with the 'bears,' the outs with the ins, the premium hunters with the victimised—that in advocating one system which is just or in exposing another which is unjust we are sure to make enemies of the disappointed and the unprincipled. Our course, however, is straightforward and plain; we shall fearlessly pursue it."

We wrote the above lines 40 years ago, and they are appropriate now to the present state of affairs.

We received a telegram on Saturday from the agent of East Blue Hills, to say that the lode had been opened out in the bottom level 5 fms. long, and fully up to the value placed upon it in each end. The whole of the stuff broken from it has averaged rather over ½ cwt. of tin to the ton of stuff. Another agent writes us that by adding 12 heads of stamps to the present 12 heads worked by steam the mine can pay dividends forthwith.

The discovery or rather improvement in the hanging side of the lode at D'Ereshy, and which may prove of great importance, is at present valued by the agents at 1½ ton of lead ore per fathom. We may next week refer more particularly to the mine and the company now working it.

At Metal and Flow in cutting down the shaft a lode 1½ ft. wide has crossed it, and some pretty stuff containing munda, peach, and wedges of tin. This must soon form a junction with Metal lode, which has been cut in the bottom of the shaft, and looks well.

At New Langford the agent writes that a favourable change has taken place in the strata by the side of the lode, which is 3½ ft. wide—blende, munda, lead, and veins of low produce silver. The change in the ground which is the most important feature, and he says is "exceedingly favourable both for progress and mineral."

AN AMERICAN GOLD MINE.

The Plymouth Consolidated Gold Mining Company is located in the town of Plymouth, Amador County, California. The company owns land nearly 1 mile in length on the line of the mother lode, with a width varying from 500 ft. to more than a ¼ of a mile. The principal mine consists of an immense chimney of ribbon quartz, from 30 to 50 ft. wide and 315 to 440 ft. long. The ore mills freely, and contains 2 per cent. of sulphurets. There are three shafts—the north and the south which follow the vein, and the Pacific shaft which is vertical. The latter has three compartments, two of them 5 by 4 ft., and the third 5 by 3½ ft., and 12 by 14 in. pieces. This shaft is equipped with superior hoisting machinery. Self-dumping automatic skips are used, hoisting 3000 lbs. of rock each, with English flat wire cables. The derrick frame is 76 ft. in height. On the Pacific claim the levels are as follows:—No. 1 is 1060 ft. below surface, No. 2 is 1157 ft., No. 3 is 1237 ft., No. 4 is 1310 ft., and No. 5 will be opened this summer. Very little difficulty is experienced with water, no pump needed. The company have two stamp mills running with an aggregate of 120 stamps, both mills are in excellent condition, and together crush about 250 tons of rock daily. Connected with the mills are 40 Frue concentrators for saving sulphurets. It is considered that this mill is one of the best equipped in existence, and the United States Treasury Department, in its report on mining, says of this mills—"It is considered a model one for effectiveness and economy." The company's chlorination works recently constructed have proved a gratifying success. The company owns extensive water works. In addition to the several reservoirs there are canals as follows:—Main, 25 miles long; South Fork or Bridgeport, 20 miles long; Simpson, 23 miles long; Tyler, 4 miles long; in addition there are several branches, and also canals leading the water from Plymouth to the country below, in all about 40 miles, the whole system making a total of 160 miles of canal owned by this company. The water used for power is conveyed from the Simpson Canal reservoir 2½ miles in iron pipes 18 in. diameter. At the Empire and Woodford shafts a pressure of 550 ft. is obtained, and at the Pacific shaft a pressure of 561 ft. The improvements have cost about \$500,000 in addition to what has been expended in development of the mine and for operating expenses. All the real estate, plant, and improvements of every kind with material are owned without debt or incumbrance. The company was formed June 1st, 1883, by the consolidation of the Empire, the Amador, Pacific, and the Plymouth companies. The mines are well developed, and a considerable amount in dividends has been paid. Prior to the consolidation gold to the amount of about \$2,500,000 had been produced. The following is a statement of receipts and expenditure since its commencement, June 1st, 1883:—

Receipts—	
Cash in hand at time of organisation	\$ 153,310.80
Gold bullion produced by the mine as follows	
from June, 1883, to December, 1885	1,060,688.85
Total	\$1,714,008.65

Expenditure—	
Operating expenses	\$541,158.75
Construction	148,554.84
19 dividends of \$50,000 each	950,000.00
Total	\$1,639,713.59

Cash in hand January 1st, 1885

The cash in hand was actual surplus as the company had no indebtedness whatever.

THE TRANSVAAL DRAFT GOLD LAW, 1885.

Art. 1. All former laws and resolutions of the Volksraad and regulations bearing upon gold digging are hereby repealed.

2. The mining rights of all precious stones and metals belongs to the State, with this understanding, that all former cessions of that right privileges to landowners or other persons or companies granted by any former law, regulation or custom lawfully required, shall remain in force.

3. Under precious stones shall be understood in this law; diamonds, rubies, and precious metals; gold, silver, and platinum. This law does not apply to the exploitation of mines of other stones or minerals.

4. Whenever it may be deemed necessary, the Government shall appoint a properly qualified mineralogist as State mineralogist and assayer, whose duty shall be to investigate and fully report upon minerals in all the districts, and further to assist the Government by advice and otherwise in all matters affecting mines and the development of the mineral resources of the country, under such regulations as the Government, subject to the approval of the Volksraad, may prescribe. The salary of the State mineralogist shall be fixed by the Volksraad.

5. The Government has the right to appoint from time to time one or more commissions of trustworthy and competent persons to investigate and report upon questions having reference to mining.

6. The State President has the power, with the advice and consent of the Executive Council, to proclaim and set open Government lands, and with the consent of the owner also private lands as public fields.

7. The unsurveyed lands proclaimed as public gold fields shall, as soon as possible, be surveyed, and a diagram issued at the cost of the State.

8. Any landowner shall be at liberty to prospect for precious stones or minerals within the limits of his property free of license and under conditions hereinafter set forth to exploit mines in his land or have the same worked. He shall not be allowed to throw open his ground to the public as a gold field.

9. Any person who has a written permission from the owner of a private farm or piece of ground to prospect such ground, can obtain from the Field Commissioner or Landdrost of the district he wishes to prospect, the requisite prospecting license for the term mentioned in the written permission aforementioned, upon payment of a license of — per month, whereof one-half shall go to the landowner.

10. The discoverer of precious stones or precious metals on private farms or on Government ground, distant at least 3 miles from any already worked locality, shall, upon proclaiming such place or ground, be entitled to hold and beacon off a claim, either reef or alluvial, which shall be called and registered as a prospector's claim. Moreover, he shall have the right to work thereon without license as long as he shall remain owner.

11. In case a private landowner has given written permission to anyone for the purpose of obtaining a prospecting license to prospect upon his land (pursuant to Article 9) and precious stones or minerals are discovered, the State President, with the advice and consent of the Executive Council, and with the acquiescence of the owner, shall have the power to proclaim such land a public gold field, or by proclamation to annex it to an already proclaimed field.

12. A prospector who, in accordance with Articles 9 and 10 of this law, finds payable precious metals or precious stones, shall not lose his rights through the unwillingness of the Government or of the owner of private land to proclaim the same a public field or to annex the same by proclamation to a proclaimed field.

13. A delegate from the nearest Diggers' Committee, where such exists, or the nearest Field Commissioner or Landdrost, shall be the proper judge as to whether the precious stones or minerals discovered upon newly-opened land is payable or not. If its payable character is sufficiently shown a written certificate thereof shall at once be sent to the prospector.

A full report of such discovery of payable precious metal or precious stones, shall with all particulars be at once sent to the Government.

14. The holder of a prospector's license, as soon as, upon his report, investigation has been made, and the payable character of the grounds discovered by him is officially certified as defined in the foregoing article, shall have all the rights of an ordinary digger besides his special rights as prospector, and these rights he shall have on private land, even if the owner refuses to have the same proclaimed a public field.

He shall, in that case, to enable him to work his claims, be entitled to sufficient water from the nearest water-course on the farm, unless the owner thereby absolutely suffers by damage.

This article shall not apply when a landowner has specially hired anyone to prospect for him, or when a special agreement is made for the granting of a written permission mentioned in Art. 9, whereby the prospector, with the object of obtaining the written permission, waives his claim, in writing, to the benefits of this article.

15. When a farm is situated in an uninhabited district the holder of a prospecting license shall not be liable for damage resulting from his prospecting upon an unoccupied farm, and if precious stones or minerals in payable quantities should be discovered such prospector shall derive the same benefits and obtain the same rights as he would if prospecting upon Government land.

16. The owner or owners of a proclaimed farm, or farms, shall be entitled to beacon off 10 (ten) claims, either reef or alluvial, which shall be termed "owners' claims," subsequently to be worked without license being paid thereon, after the discoverer of the precious stones or minerals has beaconed off his prospectors' and diggers' claims. After the beaconing off of the prospector's and owners' claims other diggers may beacon off claims for themselves, according to law.

17. The owner of private land proclaimed a public field shall at the termination of each quarter receive one-half of the returns of diggers' and prospecting licenses. All licenses for stands or for wood-cutting on private land, accrue to the proprietor.

18. The Field Commissioner shall register a prospecting claim if the ground, containing the precious stones or minerals, lies within his jurisdiction; or otherwise the Landdrost of the district wherein such ground lies.

19. Where private farms are proclaimed public fields, or by proclamation are annexed to formerly proclaimed fields, no damage shall be done to the houses, buildings, waterfurrows, gardens, or cultivated lands without the consent of the owner. Under all circumstances sufficient water shall remain free for the use of the proprietor, his household and stock, and for the irrigation of gardens and lands under cultivation at the time of the proclamation.

20. The owner of a farm or piece of land who desires the right to open and exploit mines on a portion of his ground can obtain from the Landdrost of the district in which the farm or piece of ground is situated a yearly renewable "Mijnpachtbrief" (mining lease), if his farm together with the portion on which he desires to have the mining lease is surveyed and represented by a diagram.

For this "mining lease" shall be paid yearly a sum estimated at 2s. 6d. (two shillings and sixpence) per morgen, or portion of a morgen, while the holder of the mining lease shall be subject to the following conditions:—

1st. He shall keep proper books of all finds;

2nd. Inspection of the books shall be given at all times to the Landdrost or other official appointed for this purpose;

3rd. The Government shall always upon demand for a renewal of the mining lease have the right, instead of the 2s. 6d. per morgen, to demand the payment of 2½ per cent. on the finds of the past year, as shall be proved by the books or by other means;

4th. If demanded by the Government official the books shall be verified on oath.

Art. 21. Anyone hiring a portion of the ground from the owner of a farm or a piece of land with the intention of mining thereon may obtain a mining lease the same as the owner if his deed of lease is drawn by a notary and registered. This mining lease shall be renewable for as long as he remains lessee of the land leased, and with licenses thereon may be transferred from one person to another without payment of Government dues, but a Notarial deed must be passed. Each deed of transfer must be stamped at per Article 78 of this law.

22. For each proclaimed field the Government shall appoint a Commissioner, the salary to be determined by the Executive subject to the approval of Volksraad.

23. The oath of a Commissioner shall be the same as that of a Landdrost. All officials, on whatever gold field, shall be duly sworn on taking office.

24. The clerk of the Commissioner shall be secretary of the diggers committee, prosecutors and registrar of the lower Courts.

25. If necessary, the Government shall appoint one or more clerks in this department of the Commissioner.

26. The Field Commissioner shall have supervision over the fields under his jurisdiction. He shall at the same time be vested with authority to regulate and to direct in accordance with this law and all regulations which hereunder may be published by the Government. He will also have regard to the grievances of the diggers, and do all that is conducive to the prosperity of the fields and the sanitary condition of the population. His civil and criminal jurisdiction shall, until a special magistrate has been appointed, be equal to that of a Landdrost. He shall *ex officio* be a Justice of the Peace for the whole Republic. In what concerns the administration of the civil and criminal jurisdiction of the Field Commissioner, the laws and customs of force in the Landdrost Courts shall be applied. Also with regard to appeal to a superior Court, the same laws will apply.

He shall within the boundaries of the field over which he has jurisdiction, have the same authority with reference to marriages as is given to Landdrosts by the marriage Ordinance (Law No. 3, 1871).

27. The Commissioner shall not hold claims on the field over which he is appointed, nor directly or indirectly carry on business or conduct agency of any kind, or hold shares in any mining or trading company.

28. The Field Commissioner can issue prospecting licenses, which shall be valid within a radius of 25 miles beyond the limits of the proclaimed field over which he is Commissioner. Every Landdrost may also issue such licenses, which shall be valid in his district.

29. The Commissioner shall keep books of revenue and expenditure. He shall also keep proper registers of all licenses and rights granted by him to individuals or companies, as follows:—

a. A register of trading licenses;

b. A register of all licenses given to diggers in the gold fields;

c. A register of all prospecting licenses granted to diggers upon private land, with mention of the owner and the farm on which the digging is carried on. No prospecting license to dig on private ground shall be granted without the written consent of the owner.

d. A register of licenses granted on lands whereon concessions have been granted which must mention the name of the concessionaire and of the farm. No license to be issued on such land without the written consent of the concessionaire.

e. A register of rights to water, to claims, &c.

f. A register of transfer of claims or other mining rights.

g. A register of all mining lease deeds, granted by him according to Art. —

30. He shall further be bound to send to the Treasurer-General monthly statements, and to remit all moneys received by him.

31. The following shall also be strictly observed by him.

a. That no person shall without a proper license trade or mine.

b. That his clerk or clerks shall keep proper records and minutes of all cases adjudicated in his Court, and that his subordinate officials discharge their duties, and give account in all matters, and of all moneys entrusted to them.

c. That all Government buildings, goals, tents, goods, &c., are kept in good order.

d. That all import duties on goods imported from abroad, and on which duty has not already been paid, shall be carefully collected.

e. That all stamp duty due to the Government on the transfer of claims shall be duly paid.

f. That all fees and other moneys payable to the State pursuant to this law or any later laws and regulations be promptly paid, and that all special documents subject to stamp duty shall be duly stamped.

32. On every field proclaimed as herein before provided the Field Commissioner shall appoint a time for the election of a committee of nine members, who must be elected from the license holders within the jurisdiction of the Field Commissioner for a term of 12 months, on expiry of which the members unless re-elected shall retire. Of this election the Field Commissioner shall give notice by posting a notice at his office and other public places during 14 days.

33. Whoever may be elected as a member of the Diggers' Committee will have to show that he is a license holder, and also take the oath of allegiance to the State.

34. Every landed proprietor, whose land has been proclaimed a public field or annexed to a formerly proclaimed field, shall, so long as he remains owner of such land, be and continue a member of the Diggers' Committee; such landed proprietors shall have seats in addition to the elected members.

35. The name of the committees referred to in Articles 32, 33, and 34 shall be "The Diggers' Committee of the — Fields."

36. The Field Commissioner shall be Chairman of the Diggers' Committee, and shall, with the said committee, from time to time frame such rules and regulations as shall be suited to the needs of the fields, provided, however, that such rules and regulations are not inconsistent with this law or later laws or Volksraad resolutions regarding the fields for which such rules and regulations are made.

These regulations are to be sent to the Government for approval, and shall come into force on publication in the *Staatscourant* (vide Art. —).

37. If a Diggers' Committee cannot be constituted, or shall cease to exist, the Field-Commissioner shall exercise all the authority and shall discharge all the duties devolving on such committee. In case of a vacancy on the committee the Field-Commissioner shall, without delay, cause the same to be filled by a public election, of which 14 days' notice shall be given, pursuant to Art. 32.

38. From the decision of the Field Commissioner in any digger's suit, or suit with reference to mining, there shall be an appeal to the Diggers' Committee. The charge for noting appeal shall be 7s. 6d.

39. There shall be a further appeal from the Diggers' Committee to the Supreme Court. The charge for noting appeal to the Supreme Court shall be 1l. 10s.

40. Persons or companies holding concessions on private lands or on Government lands shall be free, without violating their concessions, to allow persons to dig or mine on such concessioned lands, under such lawful agreements as such concessionaires and persons may mutually enter into; provided that each person so working shall hold an ordinary digger's license and complies with the laws and regulations applicable to public fields.

41. All agents, attorneys, and advocates, who, in accordance with the laws of the land, are entitled to practice in the Civil Courts, are entitled to admission to practice on the fields. Where the Field Commissioner acts as Landdrost, only the foregoing persons shall be entitled to practice.

The tariff of licenses necessary to practice in any Court on the Fields shall be as fixed by ordinance.

No unlicensed person shall have the right of conducting cases for others. It is, however, free to any person to conduct his case in person before any Court on the fields. He shall not, however, be entitled to costs save disbursements to witnesses and in stamps. In mining cases even agents or attorney's costs shall not be chargeable against the losing party.

42. A concessionaire permitting diggers to mine on his land, pursuant to Art. 40, shall be entitled to receive quarterly from the Government three-fourths of the amount received in licenses issued to such diggers.

43. Diggers on concessioned lands shall be under the jurisdiction of the nearest Field Commissioner.

44. Proprietors of land on rivers or other streams shall have no right of action against the Government or any gold mining company or gold diggers, or other companies or persons who under protection of the laws of the country mine or dig, for any damages for soiling or rendering the water muddy by its use in mining.

45. It is referred to the Diggers' Committee on each proclaimed field, to make such regulations with reference to water distribution

is under the circumstances of such field may seem just and reasonable.

With regard to public fields it is expressly declared that no person, under any circumstances, shall have a title or property right in the water flowing in any river, stream, or constructed water-course. Only the right to use such water can be acquired in accordance with law or regulations. In cases where damages have to be estimated the value of the water shall not be taken into consideration.

46. The State President has authority to adopt measures for the establishment of a police force, and further to take such steps in accordance with this law as he may deem necessary for the general welfare of the fields and the maintenance of order. The police force shall be under the command of the Field Commissioner.

47. In future no concessions on Government land shall be granted. When, however, on a proclaimed field localities are discovered where mining is not payable to individual diggers, or where the ground having been worked as claims has been abandoned, such localities may be granted under mining leases to one or more diggers for a fixed term of years, to enable them to work the ground by machinery, or otherwise on the following conditions:—

a. The extent of land granted under mining lease shall be not less than 150 yards by 150 yards nor greater than 250 yards by 250 yards.

b. Every application shall be posted during one month at the office of the Field Commissioner, and on the ground applied for, and shall contain a full description of the ground as to extent, situation, and whether it has been formerly worked or not.

c. Any digger has the right to object in writing to the granting under mining lease of any piece of land, giving the grounds of his objection, on which the Field Commissioner shall decide.

d. If on the expiration of the time of notice no well grounded objections have been made, the Field Commissioner shall send in the application to the Government with his report. If the Government approves then a mining lease shall be granted as per form in Schedule A to this law.

e. For this mining lease a yearly rental, calculated at 2s. 6d. per morgen, payable in advance, shall be chargeable. The mining lease must bear a stamp of the value of 5l.

f. Mining leases may be transferred in the same manner, and on the same terms, as claims and other mining rights.

g. If the land to which a mining lease has been granted be not mined, the mining lease, shall not be renewed unless under the express written authority of the Government.

48. Every application for a mining lease, right to lead water, protection, amalgamation of claims, &c., shall bear a stamp of the value of 5s.

49. Diggers being holders of adjoining claims being not less than 6 and not more than 12 in number, who wish to amalgamate their claims, can have the same registered, with all water rights belonging thereto, on application at the office of the Field Commissioner. When registered, the share of each digger shall be clearly defined. On granting the certificate of such amalgamation, under a stamp of the value of 2l., the holders of the amalgamated claims shall enjoy the usual privileges of amalgamation as per regulations on the fields where they are situated.

50. When claims are amalgamated, the working of one of them at a time shall be deemed sufficient.

51. If under this law a tract of land be proclaimed a public gold (or other) field such persons as may under prospecting licenses have marked off claims shall have the right to retain such claims on compliance with the law.

52. The holder or, in case of amalgamation, the holders of one or more quartz reef claims shall have the right to protection for 12 months upon application in writing to the Commissioner, mentioning that the protection is required to afford time to import and erect machinery to work the claims. This intention of importing machinery is to be supported by a sworn declaration.

The certificate granting protection shall bear a stamp of the value of 1l. sterling for each month of protection. On applicant ceasing to be a licensed digger the protection shall be deemed and taken to have lapsed.

53. No digger's claim lawfully marked off shall be jumpable unless left unworked for 14 days.

54. No protection shall be granted for alluvial claims, except in case of sickness or such exceptional circumstances as the Field Commissioner shall deem sufficient to warrant protection. The time of protection to be fixed according to the circumstances in each case, and no fee is chargeable for the protection.

55. All machinery for mining purposes, excepting iron or wooden houses, shall be free from import duty. Ordinary diggers' tools, spades, picks, bores, forks, &c., do not come under the operation of this section.

56. Whenever it shall be deemed necessary for the general good for public purposes, such as railways, canals, &c., to take away, wholly or in part, rights once granted, the Government shall have the right to do so upon compensation to be mutually agreed upon between the interested parties and the Government. In event of such agreement being impossible, the amount of compensation shall be fixed by one or more arbitrators elected by each side with a reference to an umpire chosen prior to the investigation, who shall decide upon any point or points of difference between the arbitrators.

57. A tract of land once proclaimed a public field, cannot be closed unless the white population is reduced to less than — per morgen. In case any such field is closed three years, prior notice shall be given, and proper measures taken for the right to continue working unexhausted claims, or the compensation of the holders.

58. Every white person who subjects himself to the laws of the land shall have the right to obtain a digger's license at 20s. a month to dig for precious stones and minerals, also the right to purchase a prospector's license for 10s. a month to prospect on Government land, wherever situated, and on private land subject to the restrictions of this law.

59. Each licensed digger shall have the right under his license to hold one alluvial and one reef claim. He shall also be allowed to buy claims from other claimholders, provided that each claim shall be represented by a licensed digger.

60. An alluvial claim shall be in extent 150 by 150 ft., and shall be properly beaconed off at the four corners with visible pegs and furrows in the direction of the claim. A quartz reef claim shall be 150 ft. in the direction of the reef, and 400 ft. broad, either across, or on one side of the reef, as desired. In the same way amalgamated reef claims must be beaconed off.

61. Each licensed digger is entitled to a stand for his dwelling, in addition to his claim, but not in a locality known to contain precious stones or minerals. He shall not pay for this, but must vacate on order of the Commissioner.

62. Every white person who desires to erect on any proclaimed field a store or shop, building or buildings, or dwelling-house or houses, may obtain from the Field Commissioner one or more stand-licenses. Each license shall entitle him to beacon off a piece of land, in extent 50 ft. by 50 ft., in a locality approved by a Field Commissioner, but not so as to interfere with mining operations on any land known to contain precious stones or metals. This stand license, whether monthly or yearly, at the option of the applicant, must be renewed from time to time. The cost of this license shall be 1l. per month.

63. Every digger shall, when called upon, render assistance in the maintenance of public order, under penalty upon refusal of forfeiture of his license, or a fine of not more than 25l.

64. Any person who, within the boundaries of a proclaimed field, shall be guilty of sedition, rebellion, or any unlawful resistance to the Government or lawful authority on the fields, shall, in addition to the punishment fixed by law for such offence, forfeit all his property situated on such field to the Government. The person or persons on whose information any person may be found guilty of one or other of the said offences, shall be entitled to the half of the value of the forfeited property.

65. Anyone trading without a license is liable to the penalties under the laws of the country; and anyone digging for precious stones or metals without a license to a fine of not less than 5l. nor more than 25l. for each offence, and failing payment of the fine to

not less than one, or more than six months' imprisonment, with or without hard labour.

66. No person shall carry on any trade whatever in precious minerals or precious stones in the rough, whereunder is comprehended the purchase or sale or the bartering of such precious metal or precious stones, unless he shall have obtained a special license thereto, for which he shall pay 10s. per quarter. Provided, however, that the individual digger or a company shall not need a license for the sale of precious metals or precious stones mined for and obtained by or for such digger or company.

67. A licensed dealer in precious metals and precious stones in the rough, shall keep such books of his dealings as the Government may from time to time be pleased to prescribe, and such dealer shall send to the auditor a true copy, attested by affidavit, of such books, in such form as the Government from time to time may direct, monthly, on the first day of each month.

68. Each person digging for precious stones or minerals, either for himself or for another, shall, on demand of the proper official, exhibit his license.

69. Any person guilty of altering, shifting, or removing the beacons or pegs of any claim, shall be punished by a penalty not exceeding 100s., with the alternative of imprisonment with or without hard labour for a period of not less than three months, or more than three years.

70. A license-holder may occupy spare ground lying between two or more claims. The figure of the ground is not fixed, but the area shall not exceed that of a claim as provided by this law. Such ground must be represented by a white person holding a license.

71. No coloured person, coolie, or Chinese, can hold a license or be in any capacity engaged in mining, otherwise than in the service of white men.

72. No person may pay his coloured servants in rough gold, or uncut precious stones, under a penalty of not more than 500s., or imprisonment with or without hard labour for a term not exceeding three years, and forfeiture to the State of such rough gold or uncut precious stones.

73. Any person purchasing, trading, or receiving rough gold or uncut precious stones from a coloured person, either on a proclaimed public field, or elsewhere within the limits of the South African Republic, shall be fined a sum not exceeding 1000s. and imprisonment for not more than five years, with or without hard labour, besides the forfeiture of such rough precious metal or uncut stones to the State.

74. A coloured person, coolie, or Chinese selling, bartering, or disposing of rough precious metals or uncut stones, or being in possession of such, shall be punished by the infliction of not more than 50 lashes and imprisonment for a term not exceeding 12 months, with or without hard labour, and forfeiture to the State of such raw metal or stones.

75. Any person suspected of being in unlawful possession of rough precious metal or uncut precious stones, in any part of this Republic, may be searched by thereto authorised persons without prior notice being given, or special authority being granted thereto.

76. Any person cutting a water-course through a road or footpath, shall construct a proper bridge, if not any official or private individual may fill the furrow.

77. Any person willfully damaging a mine, claim, machinery, water-course, or other mining property or effects, or who shall merely be guilty of attempting to commit such offences, shall be punished with imprisonment with hard labour for a period of from one to ten years, according to the circumstances.

78. When a person or a company shall purchase landed property with or without a concession from the Government, or from a private person, for the purpose of digging for precious minerals or stones, and the purchase consideration is stipulated to be in cash, and in shares of a company already formed, or about to be formed or to be established, the transfer dues shall be calculated only upon the cash portion of the consideration to be paid for the property, and not on the shares, nor on the transfer of leases or concessions, nor on mining leases on Government lands. No duty shall be paid on the transfer of any mining leases on private lands, but there shall be a notarial deed whereon the usual stamps on notarial documents and usual transfer stamps must be affixed according to law. Transfers must be registered at the office of the Registrar of Deeds.

79. A coloured person who has contracted, either verbally or in writing, to serve his master as a domestic servant, or as a servant in a store or shop, or to aid in working in any claim or water-course, or with machinery, on any proclaimed field, and who shall, without permission, withdraw or absent himself from his master's service, or shall neglect to perform such work and discharge such duties as by law may be required of him, or who shall use threatening and abusive language towards his master, his master's wife, or any other person, lawfully placed over him, shall be punished by a fine of not more than 2s., and failing payment to imprisonment with or without hard labour, not exceeding one month, or by flogging not exceeding 25 lashes. A servant, not being a coloured person, guilty of a contravention of the offences specified in this section, shall be punishable by fine in a sum not exceeding 5s., or with imprisonment with or without hard labour for a term not exceeding three months. The Field Commissioner shall, further, within the limits of the proclaimed field over which he is appointed, have the same authority and discharge the same duties as a Landdrost under Law No. 13, 1880.

80. For each Kafir labourer employed in mining, the employer must procure a permit, at the cost of 1s., from the office of the Field Commissioner. Every contravention of this section shall be punished by the infliction of a fine of 5s.

81. To any person or company importing machinery to work one or more claims shall, in addition to the ordinary claims, be allowed sufficient ground for the erection of such machinery, provided such allotment be possible without infringement of the rights of others.

82. For the right to cut firewood on any proclaimed field for domestic purposes, a monthly permit, issued at 6s., must be obtained. When wood is needed as fuel for brick-kilns or machines, permits for wagon-loads may be calculated at — for each wagon load of — lbs.

Such permits are obtainable on Government lands from the Field Commissioner, and on private lands from the proprietor.

Any person cutting wood without a permit shall be punished by a fine of 1s. or imprisonment for a week for each offence.

83. Any digger desiring to abandon his claim or claims, with the object of marking off a new claim or claims, shall be entitled to do so provided he withdraws the pegs of the abandoned claims and posts a notice on the ground, for a week, of its abandonment.

84. Special conditions and regulations shall be of force on every proclaimed field immediately on publication in the *Staatscourant*. The State President, with the advice and consent of the Executive Council, has authority to alter or amend such special conditions and regulations on the request of the Diggers' Committee on any proclaimed field. Such alterations or amendments shall be of force 14 days after promulgation in the *Staatscourant*.

COLLIERIES IN NEW SOUTH WALES.—"Without any exaggeration," writes the New South Wales Chief Inspector of Collieries, in a report on the coal resources of the colony, "we can undoubtedly claim to be in possession of the richest, most accessible, and most extensive coal fields in the Southern Hemisphere, which must ultimately make New South Wales the greatest and richest of all the Australian Colonies; and we know the value of them, and how much as a nation Great Britain has to depend upon its collieries for its great national prosperity. Our bituminous, semi-bituminous, splint, anthracite, and Cannel coals are equal in thickness and in quality to any found in other parts of the world, and we have numerous deposits of petroleum oil Cannel coal, some of them superior to any yet found elsewhere. During the last few years the growth of our coal trade has most satisfactorily and rapidly increased; and when the proposed extra shipping appliances are completed at Newcastle, and vessels can have rapid dispatch, our trade will undoubtedly increase at a much greater rate than it is even now doing."

TERMINATION OF THE MINERS' STRIKE.

As we stated would be the case at the commencement of the struggle between the coal miners in the West Riding and their employers, the strike against the proposed 10 per cent. reduction of wages has been of short duration. The Association, although supporting the strike, was only able to pay its members what they were entitled to for two weeks, and then it dwindled down to less than one-half, whilst the non-Unionists have had to live upon the charity of the shopkeepers, publicans, and the public. Under such circumstances it is not to be wondered at that men who, previous to the strike, had been taking home from 30s. to 3s. a week should consider their position, and come to the conclusion in their own minds that it was better to work and keep a comfortable home than half starve their families in the carrying out of an idea with respect to which they had scarcely a voice. In the early part of the week, after the small pittance doled out on Saturday had been exhausted, a great many of the old and steady workers determined that they would no longer be deluded, and although the delegates at the Conference at Barnsley, on Monday, agreed that the struggle should be continued, yet on the following day the men at two large collieries, one of them being Mitchell Main, agreed to resume work at the reduction. This resolution gave heart to hundreds of others, and on Wednesday negotiations took place at several collieries and a decision came to, that the reduction should be acceded to and work resumed. The men at the Old and New Oaks, Swaithe and Edmonds Main, Darfield Main, Rockingham and Barrow, also determined to go to work, the latter, however, making some qualification which is of no significance. Consequently, during the first four days of the week, say, upwards of 6000 men agreed to the terms against which they struck. This statement is apart from the decision come in West Yorkshire by the men employed by Messrs. Pope and Pearson to go to work at the reduced terms. To all intents and purposes the strike, which has lasted out more than seven weeks, may now be said to have collapsed, to the discomfiture of the officials connected with the Miners' Association, who have all along preached opposition to the reduction, but who now disclaim having urged the men to fight against the reduction, and now quietly advise them to go to work. But as a great deal of the trade which by arduous labour and expense was built up in the district has been forced out of it by the stoppage of so many collieries, it is likely that during the summer months the miners in the West Riding will not average more than four days' work weekly. The price of coal also promises to be much lower than for several years past, so that the miners prospects are anything but cheering. With respect to Denaby Main the men have received so much mistaken sympathy that they have passed a resolution to remain on the ground even should the colliery be set down by the removal of the machinery and the drawing out of the horses and ponies. This simply means they purpose becoming permanent paupers, to be maintained at the expense of the miners who prefer to work, and such outsiders as can be found to sympathise with chronic idleness. So far as regards the miners who have been out on strike, we believe their reply to the claims advanced by the Denaby Main will be—"Go to work the same as we have done." At Denaby the men have received all that can be legally obtained from their employers, and even more, for they have been allowed to remain in their houses without paying rent, yet they will not, like the other men who have succumbed, go to work on the terms offered—whilst they declare that they will not allow others to go into the mine on any terms whatever.

A NEW CONCENTRATOR.

Prof. J. E. CLAYTON, of Salt Lake City, has patented an improved machine for concentrating slimes, tailings, sulphurets, or other substances in which it is desired to separate the heavier from the lighter portions. The machine consists in a circular pan having a hollow central cone with vertical slots through which the discharge of tailings may be made. A series of rings fit this cone by which the point of discharge may be raised or lowered; and there is a conoidal diaphragm at the bottom of the pan with outwardly inclined perforations or jet-holes, through which water may be forced into the mass to be concentrated. The revolving hopper at the top has pipes which extend downward so as to deliver the material to be concentrated around the inner periphery of the conoidal bottom. The machine has a series of vertical rods having toes or scrapers at the bottom arranged with relation to each other so as to act successively in spiral lines upon the lower stratum of concentrates; and there are exterior slotted outlets for the discharge of the concentrated material, and a flat circular wheel or annular disc fitted to the bottom or lower end of the slotted outlets with corresponding holes or openings. There are means for moving it so as to open or close the outlets. The upward current of water sorts the particles of ore according to their density, the lighter particles rising to the surface and flowing out with the water, while the denser particles resting on the bottom are gradually moved outward to the periphery of the pan and the outlets, by the scrapers, the rotation of the mass, the conoidal or sloping form of the false bottom, and by the oblique action of the inner circle of jets of water. The patent covers a number of details of construction which makes the concentrator more perfect in its action.

COPPER, TIN, AND LEAD.—Messrs. FRY, JAMES, and Co., write under date, May 28:—Copper: The recovery in value of Chilian, noted in our last, was held but for a very short time, the decline from 45s. 7s. 6d. per ton on the 14th to 43s. 7s. 6d. yesterday, for g.o.b., having brought values again almost to the lowest point. Iron is without quotable change. Tin has again become substantially dearer, 5s. foreign showing a rise in prices of 50s. per ton since our last. Lead is in fair request, and a shade dearer to buy. Spelter without change. Tin-plates low in price, but in pretty good demand.

HOLLOWAY'S PILLS—WRONGS MADE RIGHT.—Every day that any bodily suffering is permitted to continue renders it more certain to become chronic or dangerous. Holloway's purifying, cooling, and strengthening pills are well adapted for any irregularity of the human body, and should be taken when the stomach is disordered, the liver deranged, the kidneys inactive, the bowels torpid, or the brain muddled. With this medicine every invalid can cure himself, and those who are weak and infirm through imperfect digestion may make themselves strong and stout by Holloway's excellent pills. A few doses of them usually mitigate the most painful symptoms caused by undigested food, from which they thoroughly free the alimentary canal, and completely restore its natural power and action.

WHEEL SILVER AND LANTEGLOS MINE.
FOR SALE, ONE HUNDRED VENDORS' £1 SHARES, fully paid up, at 10s. per share. Offers invited.
Address, "E. S. D.," Junior United Service Club, 8, W.

WANTED, for the New Terras Mine, a FLY WHEEL, from 10 to 12 tons weight; must be 20 to 21 feet diameter. Quote lowest cash price delivered Grampound-road.
Apply, Associated Mineowners' Corporation, ROBERT WINK, Secretary, Grampound-road, Cornwall, May 23rd, 1885.

WANTED, for the London office of a mining company, an ASSISTANT SECRETARY. He must be a thoroughly competent book-keeper and correspondent. A knowledge of German and French desirable. Preference given to one who has been in a mining office.
Apply in writing, giving qualifications fully, and state salary required, to "Mr. E.," care of Lownds and Son, Printers, 148, Fenchurch-street, E.C.

WANTED, a thoroughly competent MINING ENGINEER to undertake the underground management of a Silver-lead Mine abroad. Must have good practical experience of silver-lead mines and dressing operations, and possess first-rate testimonials. Good health and energy indispensable. Further information will be given to suitable applicants. State qualifications and salary required.
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JUNE 19TH, 1885.

PUMPING AND WINDING ENGINES AND AN AIR COMPRESSOR
FOR SALE WITHOUT RESERVE.

H. V. NEWTON, Auctioneer and Valuer, Polstrong Farm, Camborne, is instructed to SELL BY AUCTION, without reserve, on FRIDAY, the 19th day of June, 1885, at One o'clock in the afternoon, precisely, at Abraham's Hotel, Camborne, the following

STEAM ENGINES.

Now standing in their respective houses at South Roskear Mine, Camborne.
A 70 inch Cylinder Pumping Engine, 16 feet stroke in the cylinder, and 7 feet 6 inches in the shaft, with metallic packing rings and air pump bucket.
A 20 inch Winding Engine, with heavy fly-wheel and whelm cage attached.
A 24 feet fly-wheel on wrought shaft, metallic packing.
A 36 inch Cylinder Stamping or Winding Engine, with heavy fly-wheel on wrought iron shaft, metallic packing, &c.
A 16 inch Air Compressor, 3 feet stroke, with wrought iron shafts and heavy gear wheels.

A 36 inch Stamping or Winding Engine, with two heavy fly-wheels on wrought iron shafts, 3 feet stroke, &c.
The above engines are in excellent condition, and fit for immediate active service. There are no better engines in the county. They may be inspected any day prior to the day of sale by applying to Capt. JOHN WILLIAMS, Tuckingmill, the agent in charge.

The committee being desirous to wind-up the affairs of the company forthwith, have determined to dispose of the engines without reserve, thus presenting to mining companies and speculators an opportunity rarely to be met with. Any further particulars may be obtained by applying to
H. V. NEWTON, Auctioneer,
Polstrong Farm, Camborne.

W. T. RICKARD, F.C.S., &c., will start for MONTANA and CALIFORNIA on or about 16th May; and requests parties desiring Reports on Mining Properties in these and other Pacific States and Territories to communicate with him at No. 1, Downham Villas, Stanstead-road, Forest Hill, S.E.
After 16th May address, Anaconda, Montana, U.S.

NINE PARTICULARLY PROMISING GOLD MINES (limits duly defined) near to the mines of the Oscar Mining Company, are FOR SALE through me. Analysis has shown a very satisfactory yield of gold. The mines are the property of a Syndicate. Failing a direct sale I should wish to negotiate with some well known agent, who would undertake the sale of the said mines.

W. FRIIS, Solicitor,
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MECHANICAL MINER will be shortly OPEN to ENGAGEMENT. Proficient in Rock-drilling, Automatic Ore Dressing, Pumping, Winding, &c. Five years' experience in Copper Smelting abroad. Speaks English, French, and German. Highest testimonials and references.
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OILS commanding a large and successful sale. Liberal commission.
Address, "Box 22," Post Office, Liverpool.

ADVERTISER can PLACE PHOSPHATES. Also BLENDE SILVER-LEAD, and MIXED ORES direct with Smelters, no wharfage being required.
Only Mineowners need reply to "H.," MINING JOURNAL Office, 26, Fleet-street, London, E.C.

SITUATION WANTED.—A Mining Engineer just returned from abroad desires a RE-ENGAGEMENT. Life-long experience in all branches of practical mining, including surveying and accounts. Capable of designing and erecting all kinds of mining machinery. Experienced in prospecting by deep boring, lighting mines by electricity, percussive drills, &c. Used to controlling large bodies of foreign workmen. Fair knowledge of Spanish. Abstainer. Age 31. Highest references and testimonials.
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WANTED, for a small Lead Works, a MANAGER, with a practical knowledge of Lead Smelting and Manufacturing. He would be required to constantly oversee the workmen. A free house, but no other perquisite given.
Reply, stating salary, and enclosing copies of testimonials, to "Manager," MINING JOURNAL Office, 26, Fleet-street, London.

In the High Court of Justice.

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At the George Hotel, Walsall, by

MR. JOHN BAKER LYTHALL (of the firm of Messrs. Lythall, Mansell, and Walters), the person appointed by Mr. Justice CHITTY, to whom Court this action is attached, on TUESDAY, 9th June, 1885, at FOUR P.M. precisely, in One Lot, the

GREEN LAMES COLLIERY, BLAST FURNACES, AND FREEHOLD LAND.

Near Birchills Station, in the Foreign of Wallsall, with the underlying MINES OF COAL AND IRONSTONE.

This valuable Freehold Property, containing 55A, 2B, 3P., fronting the road from Walsall to Bloxwich, is intersected by the Wyrley and Essington Canal, with two Wharves, and is near to the L. and N.-W. Railway, to which it has access by a siding, its situation thus affording unusual facilities for a large business.

There are two large blast furnaces of recent erection, constructed on the best principles for the economical production of pig-iron, with all necessary plant, offices, &c., and ample room for tipping the refuse.
A good house, four cottages, with buildings now used as saw mill, sheds, &c.
Part of the land is well adapted for building purposes, and part is of useful farming quality.

The property is leased to Messrs. G. and T. Jones.
The conditions of sale, copy of leases, and schedule of fixtures may be seen at the offices of the Auctioneer ten days prior to the sale.

Particulars and plans may be had from Messrs. BRACHCROFT, THOMPSON, and Co., 1, Theobald's-road, London, W.C.; Messrs. WHAY and PHILIPS, Solicitors, 21, Chancery-lane, E.C.; Messrs. BOWMAN and CRAWLEY-BOVEY, Solicitors, 21, Bedford-row, W.C.; Messrs. GINDERS and TURNER, Land Agents, The Green, Stafford; and the Auctioneer, Bingley Hall, Birmingham.

In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACTS, 1862 to 1880, and of the OWEN VEAN AND TREGURTHA DOWNS MINES (LIMITED).

By an Order made by His Honor, the Vice-Warden of the Stannaries, in the said Matter, dated the 19th day of May instant, on the Petition of the said company, IT WAS ORDERED that the voluntary WINDING-UP of the said company be continued under the supervision of the Court.

F. HEARLE COOK, Truro.
(Agent for Snell, Son, and Green, 1 and 2, George-street, Mansion House, London, Solicitors for the said Company.)
Dated Truro, this 23rd day of May, 1885.

In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall.

HARVEY AND CO. (LIMITED) VERSUS PRISK. IN RE NORTH METAL MINE.

TO BE SOLD, under the direction of the Registrar of the said Court, pursuant to an Order or Decree made in the above Cause, dated the 11th day of March last, BY PUBLIC AUCTION, at the above-named Mine, in the parish of Breage, within the said Stannaries, on TUESDAY, the 9th day of June next, commencing at Eleven o'clock in the forenoon, in Lots, and subject to such conditions as shall be then and there stated, the undermentioned

MINING MACHINERY, MATERIALS, AND EFFECTS, viz.:-

12 inch cylinder ROTARY ENGINE, 9 feet stroke, with fly wheel, shafts, 2 cranks and driver, with 1 boiler 11 tons, balance bob, complete 8 inch black cast iron in bob, balance bob behind engine house, iron stamps axle, 12 heads, with frames, heads, lifters, &c., 2 9 feet 8 inch pumps, wood passes behind stamps, bell and stand, double and treble blocks, with rope about 20 fathoms, horse wheel complete, 4 round bidders, with gearing, &c., complete, wood floor round bidder 2 shafts and 2 sheaves, shaft tackle and two sheaves at engine shaft, 18 stands and sheaves, iron winch, 50 fathoms 2 inch iron flat rods, 5 knives, 3 heads and lifters, wire rope and chain, bellers, avil, vice, iron horse, screw stock, taps and plates, several whim kibbles, 25 fathoms haulers, 75 fathoms 9 inch ditto from shaft to pool, 25 fathoms 7 inch ditto from pool to engine house, wood road to burning house, 2 hand bidders with strips, wood screen, wood floor, brick and iron in burning house, whipsiderry and 2 sheaves at south shaft, smiths' and miners' tools, 1 1/2 inch drop screw, wood roof over burning house and shed, beam scales and stand, fire bar, borer steel, new and old timber and iron, wheel and hand-borers, nearly 1 cwt. tonnage.

Also the following FITWORK now at surface:—10 9 feet 7 inch pumps, 1 6 inch matching, 1 9 feet 8 inch pole cases, with stuffing box and gland, 1 7 inch pole, with stocking complete, 7 inch wood rods, pair side plates and caps, 2 pairs rod plates, staples, and glands, rod and flange bolts, 60 fathoms iron stave ladders, 50 feet casing plank; and also drawn from under adit 1 7 inch H and door plate, 7 inch 8 feet windrose, 25 fathoms bucket rods, 1/4 and 1/2 inch chain, 2 8 inch buckets, 2 1/2 feet pulley, 1 whim kibble, together with the account house and office furniture, and a variety of other materials in general use in mines.

The above may be inspected on application to the Bailiff in charge at the mine; and further particulars obtained at the Registrar's Office.

HODGE, HOOKIN, and MARRACK, Truro, Plaintiffs Solicitors.

Dated Registrar's Office, Truro, this 26th day of May, 1885.

MONMOUTHSHIRE.

WESTERN VALLEYS COAL FIELDS, BOROUGH OF NEWPORT. ABERBEEG AND LLANHILLETH COLLIERIES.

Also valuable and commodious COAL YARDS, OFFICES, and WHARFAGE on the River Usk, together with the GOODWILL of a COAL PROPRIETARY and a COLLIERY SHIPPING AGENCY at Newport, Mon.; also well secured royalties and other interests in the Twyn-y-Pentre and Gwaun Polen Birion Minerals, in the parish of Aberystwith, in the county of Monmouth.

MESSRS. STEPHENSON and ALEXANDER are instructed TO SELL, BY AUCTION, at the King's Head Hotel, Newport, Mon., on WEDNESDAY, the 17th of June, 1885, at Three o'clock precisely in the afternoon, subject to the particulars and conditions of sale to be then produced, the undermentioned VALUABLE and DESIRABLE PROPERTIES, in the manner and Lots following, namely:—

Firstly, the WHOLE of the SEVERAL PROPERTIES comprised in the undermentioned Lots, numbered 1 to 4 inclusive, in One Lot, as a going concern. If not sold, then in the following Lots separately:—

Lot 1.—All that colliery, known as the Llanhilleth Colliery, with the new pit recently sunk, and thoroughly equipped with powerful and efficient machinery and appliances, situated between the Aberbeeg and Crumlin Stations, in the parish of Llanhilleth, in the county of Monmouth, in the Ebbw Valley, about 1 1/2 miles from Newport, together with the cottages, valuable plant and machinery colliery horses, stores, &c., connected therewith.

Lot 2.—(If Lot 1 is not sold) all that the said Llanhilleth New Pit, with the piece of ground contiguous thereto, lease from Messrs. Power, and containing 2 acres, or thereabouts, situated in the Ebbw Valley, in the parish of Llanhilleth, Monmouthshire, sunk on the western side of the Monmouthshire Western Railway section of the Great Western Railway, about 1 1/2 miles from Newport, with the valuable new plant and machinery, thereto belonging.

Lot 3.—All that colliery known as Aberbeeg Colliery, situated in the Ebbw Valley, about 1 1/2 miles from Newport, Mon., together with the plant and machinery, horses, stores, &c., and 10 coke ovens.

Lot 4.—All those commodious wharfage and frontage ground, containing 6000 square yards or thereabouts, known as the Town Wharf, and abutting on the River Usk, Newport, Mon., with the landing stages and other appliances thereto belonging, with the cottages, offices, stables, store houses, blacksmith's shop, repairing shed, and outbuildings. Also the plant and machinery thereto belonging; also all those convenient premises in Powell's-place and Dumfries-place, Newport, Mon., in the occupation of Isaac Williams and John D. Burcher. Also the goodwill and business of coal proprietors and merchants, carried on by various succeeding members of the Powell family, at Newport, Mon. Also all that messuage and premises, No. 3, Powell-place, Newport, Mon., now used by the vendor as offices, and held with other premises for a term of 55 years, from 25th March, 1852, subject to a ground rent of £1 10s.

Lot 5.—All and singular the vendor's estate and interest for a term of 55 years from 25th December, 1863, in the Twyn-y-Pentre and Gwaun Polen Birion Mineral Property, in the parish of Aberystwith, in the county of Monmouth, and now yielding to the vendor from royalties a net sum of £800 per annum or thereabout.

The above-mentioned works and properties may be inspected, and descriptive particulars and plans and all information may be obtained of Mr. JOHN JEREMAX, at Llanhilleth Colliery; Mr. D. LEWIS, Powell's Office, Dock-street, Newport, Mon.; Mr. WILSON PHILLIPS, Newport, Mon.; Messrs. STEPHENSON and ALEXANDER, of Cardiff; or of Messrs. GUSTARD and LEWELLIN, Solicitors, Stow Hill, Newport, Mon.

FOR SALE, owing to alteration of Premises:—One GREEN'S ECONOMISER, 72 pipes; all in good working order; 100 lbs. pressure.
May be seen working at 27, Edmund-street, Liverpool.

SECOND-HAND PORTABLE, SEMI-PORTABLE, AND VERTICAL ENGINES. Several 4, 5, 6, 7, 8, 9, and 10-horse power in a thorough state of repair and first-class working condition, TO BE SOLD CHEAP.

N.B.—New Engines, of all sizes, from 1 1/2 H.P. to 200 H.P. at reduced prices, in stock or in progress of manufacture.
Apply to ROBEY and Co., Engineers, Globe Works, Lincoln.

METALLURGICAL CHEMIST (F.I.C.) desires a RE-ENGAGEMENT preferably as senior assistant with an analyst or to take charge of a laboratory. Twelve years experience, iron, steel, and general metallurgical analysis. Special experience in copper, sulphur and gold.
Address "Cuprum," care of J. W. Vickers, 5, Nicholas-lane, E.C.

MINE "EL CALLAO,"

GUAYANA, VENEZUELA.

32,200 SHARES.

Gold in bars produced in the month of April, 1885, remitted to Messrs. Baring Brothers and Co., London—9156'66 oss.

DIVIDEND distributed for each Share, 12 francs.

(Signed) P. AISTEGUIETA, Vice-President.
(Signed) VICTOR T. GRILLET, Treasurer.

THE CANADA PACIFIC IRON AND STEEL RAIL COMPANY.

The Subscriber is desirous of opening communication with some party in England for the purpose of organising the above company.
One thousand acres of red hematite ore not far from the line of the C. P. R.

Address, HUBERT C. JONES, Solicitor, Brockville, Ontario Canada

THE MASON SCIENCE COLLEGE, BIRMINGHAM.

APPOINTMENT OF PROFESSOR OF MINING.

THE COUNCIL invite APPLICATIONS on or before the 24th of June next, for the above appointment, which is now vacant.

By a resolution of the Council Candidates are especially requested to abstain from canvassing.
Information as to the terms and conditions of the appointment will be forwarded on application to

GEO. H. MORLEY, Secretary.

TEA AT WHOLESALE PRICES.—Why pay Grocers and Stores 2s. 6d. per lb. when you can buy direct from importers choice Congou Tea (whole leaf) at 1s. 4d. per lb. Carriage paid. Cash on delivery. Sample post free 12 stamps.

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QUICKSILVER-WAVE AMALGAMATOR.

A PURELY MECHANICAL AND AUTOMATIC PROCESS treating Gold Ores direct from the Stamps or Pulverisers, and superseding the use of Copper Plates, Blankets, &c.

One Amalgamator will treat 10 tons per 24 hours; size, with frame, 9 ft. x 3 1/2 ft.; weight, under 15 cwt.; power, only 1/2 H.P. necessary; quicksilver required, 120 lbs. only. Cost of treatment, 3d. to 1s. per ton of ore.

Price of Amalgamator (ready for immediate use), £100 f.o.b., a further sum of £150 at end of six months—i.e., after approval—or £100 then and a further £100 twelve months thereafter. (On royalty if preferred.)

Amalgamators have been in practical use for upwards of one year. They save 85 to 95 per cent. of gold, free, or with sulphurets (using Frue Vanners or other concentrators for all ores with sulphurets).

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Offices: 15, Coleman-street, E.C.—Works: 17, Wharf-road, City-road, N.B.—This process has the highest percentage of saving and, moreover, is the cheapest and most rapid.

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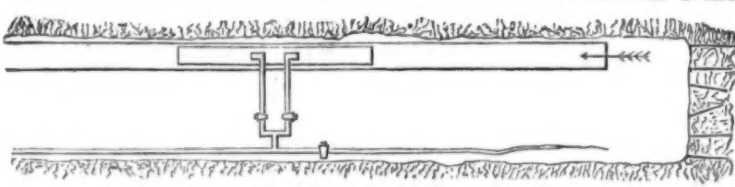
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DOUBLE-ACTING VENTILATOR.

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THE MINER'S FRIEND

Will clear all Tunnels and Ends from noxious fumes in the shortest possible time, 10 minutes only being required to clear the largest blast; distance no object.

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Its success is guaranteed. At work on the principal Mines in Cornwall.

Reference invited to Capt. JOSIAH THOMAS, Dolcoath Mine, Capt. BISHOP, East Pool Mine, and others.

FULL PARTICULARS AND TESTIMONIALS FORWARDED ON REQUEST.

JOHN SPENCER, Globe Tube Works, WEDNESBURY.

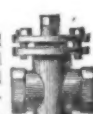
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or Coated by Dr. A. SMITH'S process. GUN METAL and IRON COCKS and VALVES. COILS of all descriptions up to 500 ft. without joint. TUBES kept in Stock up to 6 inches diameter.

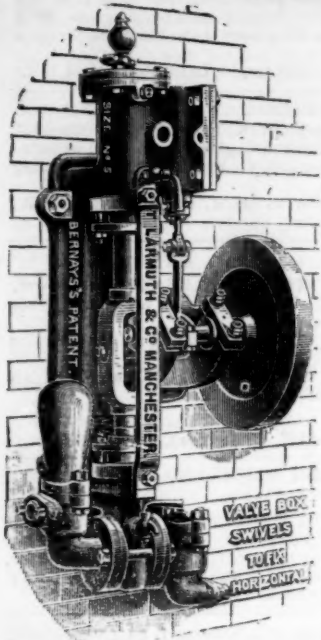
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Sole Makers of **STEAM PUMPS**
Bernays's Patent

Direct Acting with Fly Wheels.

**SIMPLE.
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RELIABLE.**

Ram Pumps for Feeding Boilers.
Double Acting Pumps for all purposes.

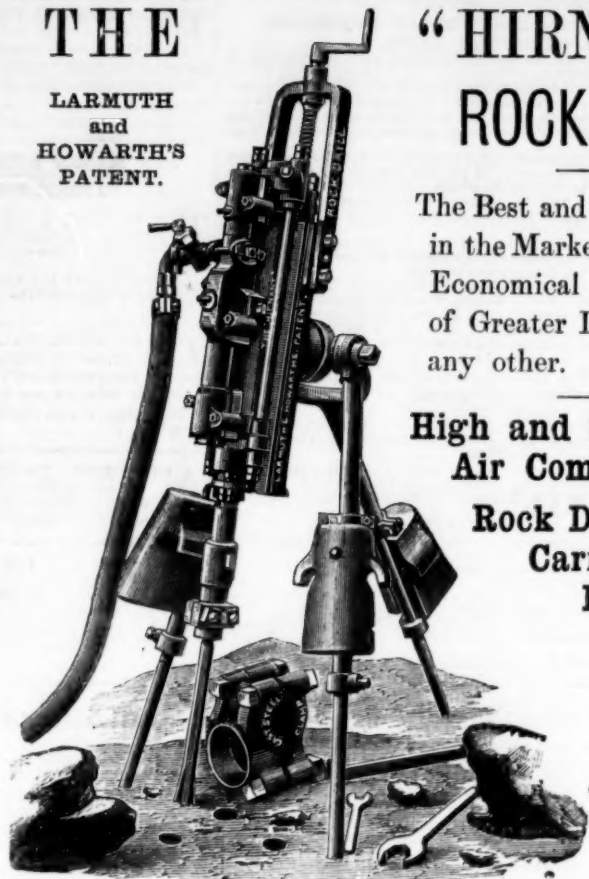
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Pumps for Mining or other work of any capacity.

PRICES OF SINGLE-ACTING RAM PUMPS, VERTICAL OR HORIZONTAL.

No.	1	2	3	4	5	6	7
Steam cylinder	2½ in.	3½ in.	3½ in.	4½ in.	5½ in.	6 in.	7 in.
Diameter of ram.....	1½ in.	1½ in.	2 in.	2½ in.	3 in.	3½ in.	4 in.
Length of stroke.....	3 in.	4 in.	4 in.	6 in.	7 in.	8 in.	8 in.
Gallons per hour.....	180	280	370	700	1060	1560	2100
Price with brass cased ram	£10	£12	£15	£20	£24	£28	£33

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The Best and Cheapest Drill
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The most powerful Detonating Caps for exploding Dynamite, developing its fullest strength.
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A new invention, doing away with the very dangerous operation generally in use of inserting cutting tools when it is necessary to open the outer tin box.

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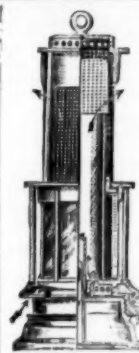
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For Marine and Locomotive Boilers, Hand-rails, Ship Pillars, Coils, &c.
TUBES AND FITTINGS FOR ALL ENGINEERING PURPOSES.

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**JOSH. COOKE AND CO.,
SAFETY LAMP**

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Makers of Williamson's Double Safety Lamp,
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Of the MOST APPROVED AMERICAN PATTERNS.

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Of the most approved German pattern and arrangement, or with Stamps and Frue Vanner Concentrators for low grade silver ores, light in lead. We have over 20 large German pattern mills at work on lead, zinc, or copper ores, and numerous Vanner mills on ores never before successfully concentrated.

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Engines of any size, plain slide valve, Corliss, compound Corliss, Boilers, all sizes. Leaching Mills, Hallidie Wire Rope Tramways, Comet Crusher, with capacity of 12 to 20 tons per hour. White, Howell, Bruckner, and Stetefeldt Roasting Furnaces, &c.

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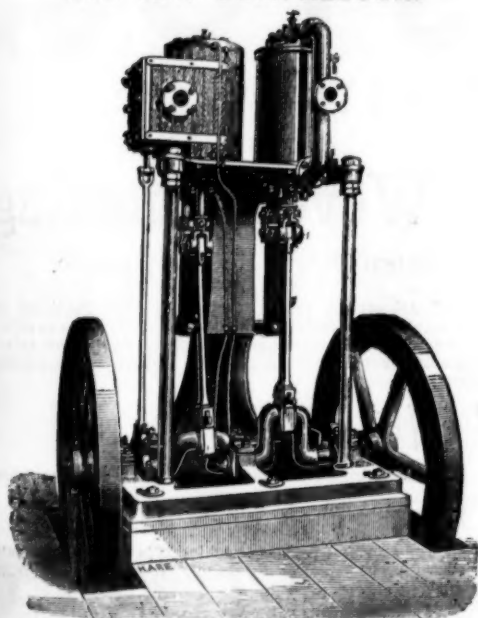
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As an instance of the actual work done by this Machinery in various kinds of ground, some of it the hardest rock, it may be mentioned that in Cornwall, irrespective of the work performed by the "Champion" Rock-borers and Air-compressors purchased by various Mines, the drivage, rising, sinking, and stoping done by contract by the Proprietor with his own Machinery now amounts to over 1500 fathoms. Several of these Air-compressors, ranging from 3½ to 12 tons in weight may be seen in constant work in the Camborne Mining District.

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Beg to announce an Important Reduction in the price of their Portable Steam Engines and Thrashing Machines, and will be pleased to send their Revised List to any address on application.



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THE ONLY GOLD MEDAL

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PORTABLE STEAM ENGINES.

The Royal Agricultural Society of England have awarded Every First Prize to CLAYTON and SHUTTLEWORTH for Portable and other Steam Engines since 1863, and Prizes at every Meeting at which they have competed since 1849

Steam Engines, portable & fixed,

For Coals, Wood, Straw, and every kind of Fuel.

OVER 22,500 SOLD.

Thrashing Machines.

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Straw, Corn, and Hay Elevators.

Chaff Cutters for Steam Power.

Grinding Mills.

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GOLD MEDALS AND OTHER PRIZES have been awarded to CLAYTON AND SHUTTLEWORTH at all the important International and Colonial Exhibitions, including LONDON, 1861 and 1862; PARIS, 1855, 1867, and 1878; VIENNA, 1857, 1866, and 1873.

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Potentite does NOT contain its own MEANS OF IGNITION, is free from Nitro-Glycerine, and its SAFETY has been special demonstrated by public experiments.

Its strength is unequalled.

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In action it gives off neither flame, smoke, nor offensive smell. By its use labour is economised, as work can be resumed immediately after the shot is fired.

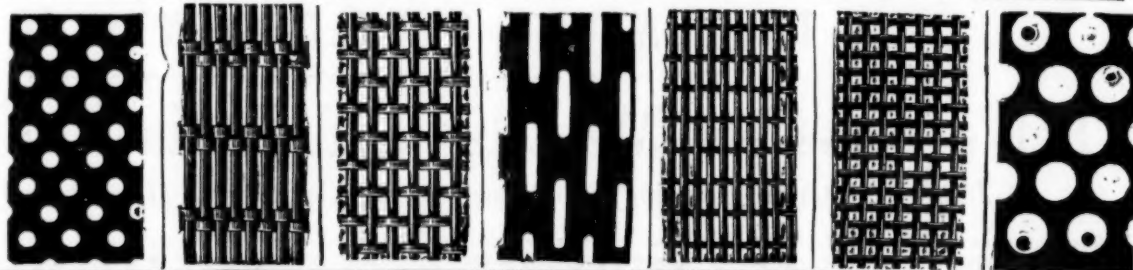
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Extra Treble Strong Wire Cloth and
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Made in all Meshes and Widths.

N. GREENING & SONS, Limited,
Wire Manufacturers and Metal Perforators,
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Jigger Bottoms, Trommels, Cylinder
Covers, Riddles, Sieves for Diamond,
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Samples and Prices free on application.

BRITISH AND FOREIGN SAFETY FUSE COMPANY,

WORKS: REDRUTH, CORNWALL,

MANUFACTURERS OF

PATENT SAFETY FUSE FOR ALL KINDS OF BLASTING PURPOSES,

For MINING & RAILWAY OPERATIONS,

ALSO FOR

ALL KINDS OF SUBMARINE WORK.

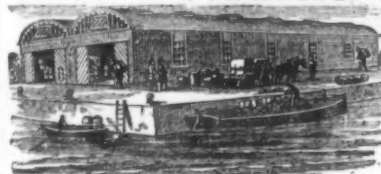
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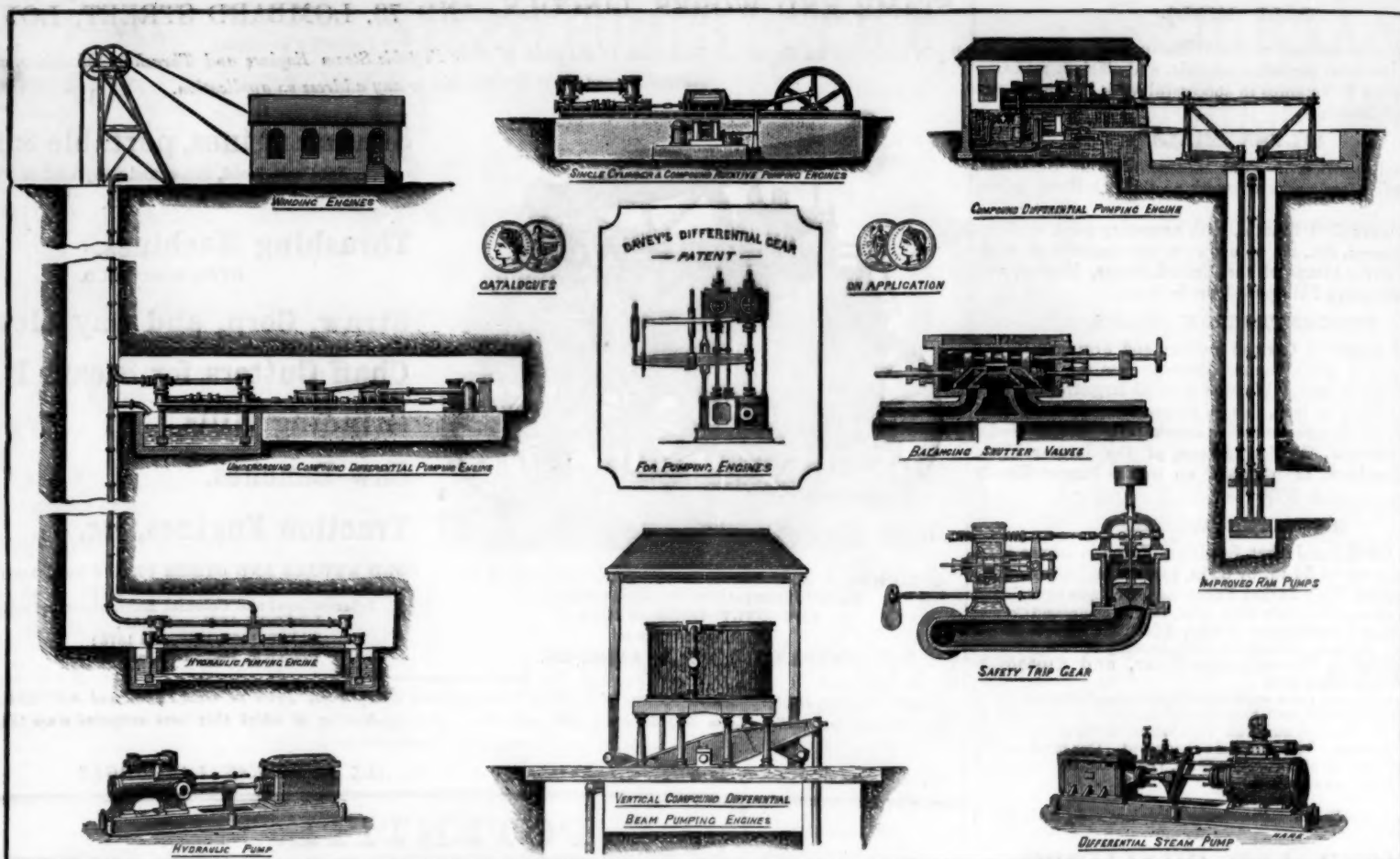
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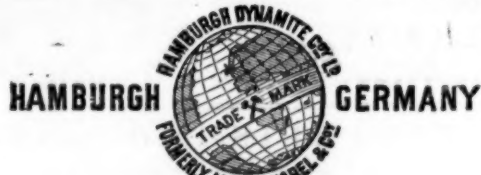
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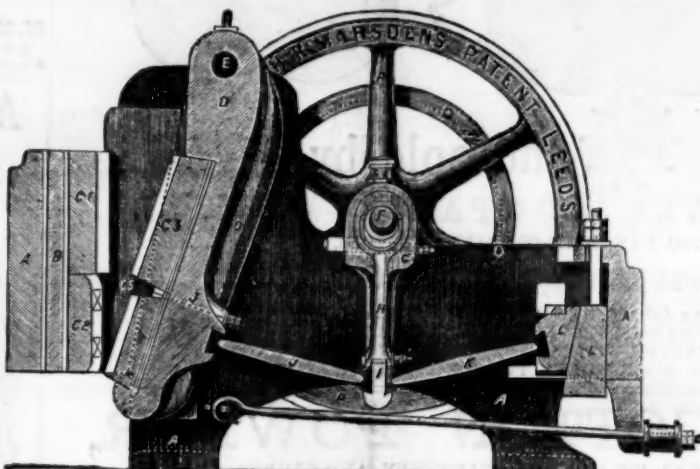
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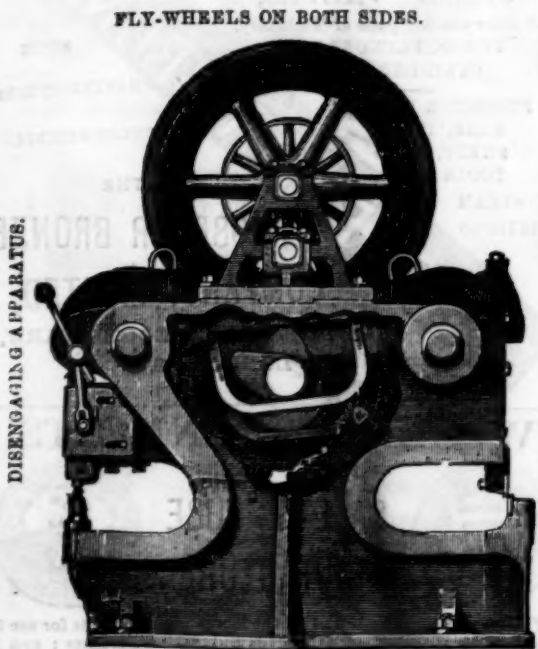
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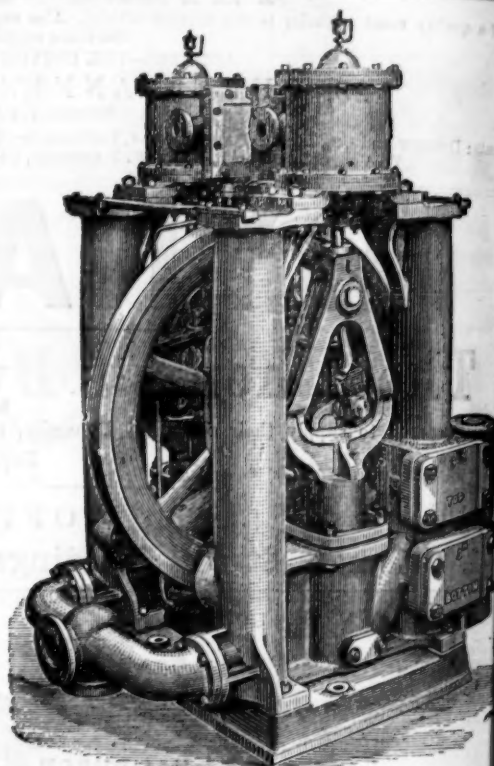
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